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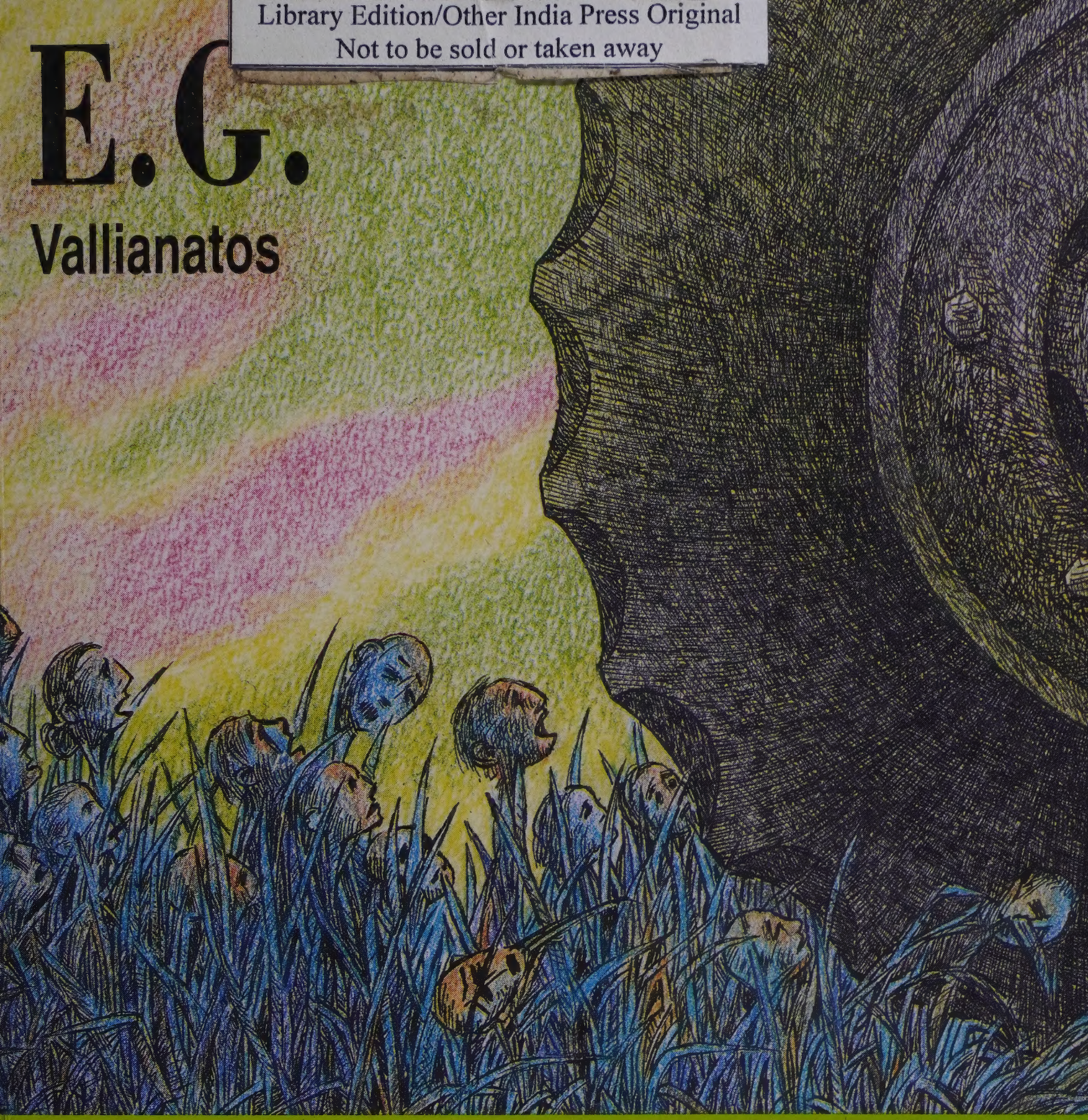

HARVEST OF DEVASTATION

The Industrialization of Agriculture and its Human and Environmental Consequences.

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E.G. Vallianatos

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For Mark and Corinna

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CHAPTER ONE

Scientific Agriculture, Peasant Farming and the Third World.

This is a book about human and ecological destruction in the name of progress. It exposes the devastation of land and people caused by the industrialization of agriculture around the world in the name of science. It argues that we can save ourselves and the earth from apocalypse only by returning to our peasant roots and by recapturing peasant traditions of sustainable farming before they are lost forever.

I wrote this book as a form of a catharsis. It was simply too much for me to carry alone the conflicts of two cultures.

I grew up the son of a peasant on the Greek Ionian island of Cephalonia but, since finishing high school in 1961, I have lived in America. My traditional Odyssean culture clashed with what I learned in college — my science education, my doctoral and postdoctoral studies, my entire work experience. In fact, I found myself in hot water in nearly everything I did in my persistent efforts to make a modest living in America. This struggle created a perpetual crisis in my soul.

Who was I? Were the simple and straight-forward traditions of my Greek peasant past becoming obsolete, nay dangerous, in the standardized society of my new home? Could America or any other industrial society ever become my real home?

This is important to me because I love the diversity and beauty of the culture of peasant communities. I still love the earth as my most ancient mother and goddess. Underneath a superficial protective camouflage of technological abstractions, I am a peasant, a primitive Hellene, a first cousin of Ulysses transported into an alien world.

Because of these origins, and because of the real and present danger of these technological abstractions, I have been moved to examine what makes American culture so threatening to non-standardized human beings like peasants — and to nature everywhere.

What is "primitive", for instance? Is it bad to be primitive? Then, what about science, the queen of illusions of any technological society? Do peasants have science? If peasants do not have science how did they manage to survive and flourish for millennia?

The United States is using agricultural science to conquer the world. American industrialized agriculture is labeled "scientific", "modern", "advanced". It has become a pervasive myth that science is somehow a pure and exact way of knowing, a systematic and reproducible method of extracting knowledge and facts from nature and society. A look at the use of science in agriculture, however, highlights the social price societies pay for standing by such a mythological view of science.

In the United States, for example, capitalism and agricultural science have largely replaced the small family farm. In its place they have created factory farms in which animals, land, food, science, technology and workers are commodities best used for the extraction of profit. It is this form of agriculture (with its social bond basically destroyed) that is moving from the advanced capitalist societies to the still agrarian regions of Africa, Asia and Latin America. Such cultural "modernization" is being accompanied by enormous social upheavals, ranging from civil wars in El Salvador, Guatemala to unrest in most of Africa, Brazil, Colombia, the Caribbean islands, the Philippines, Panama, India and Mexico and to revolts and social and political transformation in Peru and

Nicaragua. It also causes widespread ecological destruction, hunger, malnutrition and disease throughout the Third World.

That these things are happening should surprise no one. In just 50 years, from the 1880s to the 1920s, scientific agriculture was responsible for the Dust Bowl of the southern plains in the United States, an area of some 100 million acres of land destroyed in the 1930s in one of the biggest ecological disasters ever to hit the earth. This ecological catastrophe emerged primarily because agriculture's social links were broken. If my thesis is correct, other dust bowls are likely to follow the practices of factory farming in America and in other areas of the world where mining of the land has replaced husbandry and where ecological wisdom has given way to brutal and unsustainable exploitation of the environment.

America's greatest missionary endeavor has very little to do with religion and everything to do with the worldwide dissemination of its industrialized agriculture model. And yet, while many family farmers are fighting for their survival against the ruthlessness of these doctrines in America itself, and while migrant farm workers, who keep the entire system going, are not much better than slaves for rent, the few owners of this undemocratic system are doing quite well.

I argue in this book that the grim fate of the migrant farm worker demands that we restructure our farming — that we democratize agriculture and the science on which it is based. I am also arguing that scientists do not have to rediscover the wheel in their efforts to turn their present unsustainable agriculture into gentle family farming. The peasants of the Third World have some clues to what may spark an ecological renaissance in the farms of America.

For that renaissance to take place, science must become subversive: a resistance movement that rediscovers its social origins and its responsibility to serve all the people, in the United States and the world.

Thus, this is not so much a book about the power or magic of science as it is an essay on decolonizing our minds from deceptive

myths, particularly myths about the Third World: the symbolic geography and culture of the primitive in us, the impoverished communities in our midst, our migrant farm workers, our Indians, and the real societies of non-white people in Africa, Latin America and Asia.

The Third World is not primarily in the periphery of the imperial First World of white Europe and North America. The Third World is as close to us as our own neighborhood. The owners of capital in the industrialized societies are no longer interested in outright gunboat or banana colonialism. Sinclair Lewis wrote in his 1920 novel, *Main Street*, of how a "brave young Yankee" conquered a South American republic.

"He turned the natives," Lewis wrote, "from their barbarous habits of singing and laughing to the vigorous sanity, the Pep and Punch and Go, of the North; he taught them to work in factories, to wear Klassy Kollege Klothes, and to shout, `Oh, you baby doll, watch me gather in the mazuma.' He changed nature itself. A mountain which had borne nothing but lilies and cedars and loafing clouds was by his Hustle so inspirited that it broke out in long wooden sheds, and piles of iron ore to be converted into steamers to carry iron ore."

Now on the eve of the twenty-first century, this Yankee Capitalist has turned inwards with renewed determination. He is trying to persuade the natives of the North to accept his factories and development as blessings. In place of the troops he once used to force blacks and Indians in the South, to work sugar cane, rubber, timber, coffee and bananas, he is using the entire panoply and power of science and state to cover up the adverse environmental, social and health effects of his internal colonialism.

If readers have any doubt that the Third World is here in America, they need only walk through many of the ghettos of any large city or visit Appalachia or Northern California. Or, better yet, read Rachel Carson's *Silent Spring* in order to get an idea of the price paid for abandoning America's countryside to a handful of agribusinesses. That juicy steak has about 100 different bug poi-

sons in it — the stuff thrown at cockroaches is lacing much of what we eat and drink.

Here indeed is the real Third World: largely invisible but deadly pollution. It is the illusion of freedom when you are out in the street, homeless and hungry, just because you failed to follow the orders of your boss. It is the capture of science and the state by the owners of capital.

Marxists said you can overthrow capitalism with a revolutionary proletariat. But what Marx and his faithful disciples failed to foresee is the toxic pollution and corrupting power of industrial development — the dominant model for capitalists and state socialists alike. Thus, it does not very much matter who is in charge of an industrial society — workers, farmers, wildlife, forests and rivers are expendable. You simply turn your own people into natives and you use the powerful apparatus of science and state to conceal the wounds caused by your industrial oppression. The lethal tetra dioxin molecule of pesticides, pulp mills and garbage incinerators does not differentiate between people living in California, Poland, Sweden, Russia or the Philippines.

The Third World is both a metaphor and a cruel fact. It is a huge labyrinth of solitude and a state of original creation. It is the place where millions of stubborn peasants go on with the eternal matters of survival, safeguarding ancient methods of farming and gentle cultures.

Understanding the Third World is a fundamental step in knowing who we are — we, the subjects of America, a huge colonial empire threatening the Third World with cultural extinction. In the spring of 1989 at Humboldt State University in northern California, one of my students, Michael Penney, wrote these words about the challenge and complexity of the Third World:

"I hear that the Third World is a place where non-renewable resources are exchanged for consumer goods that fall apart and must be bought anew.

"I hear that the Third World is a place where the government serves the wealthy classes far more than the humble masses.

"I hear that it is a place where the elders sleep in the street with a stomach full of refuse and beer.

"I hear the Third World is a place where money buys laws, where overstuffed conglomerates set an assembly line pace and ignore regulations designed to protect the environment we all share.

"Have you been there?

"The Third World is the final place: humankind's last stand will be made here on this third planet from the yellow star in the outer spiral arm of the Milky Way.

"The universe would love to see us make it but can't interfere — it is up to us to make it here on the Third World."

Michael Penney listened carefully to the passionate class discussions about the crises of the Third World and concluded that we all live there — "on this third planet from the yellow star." This book is a confirmation of Penney's poetic conclusion.

I start by analyzing the meaning of innocent-sounding words like "primitive", "peasant", "science", "modern", "industrialized" and "developed" so that we understand the colonialism and violence behind North America's and Europe's presumed superior right to re-order the Third World — the entire earth, that is — to fill their voracious needs.

With that understanding, I would hope, each one of us would be empowered not only to pray to the gods for help but also to join the Bushman, the peasant and other "primitive" peoples in protecting the cultural diversity, biological richness and freedom of our common Third World — the third planet from the yellow star.

CHAPTER TWO

Primitive Sin, Destructive Science and Lethal Technology

I do not know how or when people decided they were no longer "primitive". It must have happened a long time ago in some cosmopolitan city when priests of a new religion made fun of peasants worshiping the old gods. At any rate, the idea of ridiculing the primitive, the ancient, the first-born, the first-created, was never part of the mythology of agrarian, or first people. These human beings saw themselves still rooted to the beginnings of life, the ooze of existence. Their veneration of mother earth was simple enough. The bountiful blue-green star was the icon of fertility and dreams. It nourished those early people with clean water and food. And it was a mythological paradise for gods, goddesses, rivers, mountains and myriads of plants and animals on both land and in the wine-dark waters of the seas.

But once people set out on a conquest of that very mythological kingdom, once their religion told them that everything else on earth was made for their convenience, and in fact they had a duty to bring all the "wild" and the "backward" under their god and authority, the idea of the primitive became dirty and savage.

Christian missionaries think they are doing God's work when they bring "civilization" and their brand of religion to "primitive" people. What they ignore, however, is that their culture is destructive of what kept those primitive human beings alive for so long.

This is because Christianity and the industrial civilization that grew out of Christianity are hierarchical political and cultural systems that demand the obedience of the many to the will and whims of the few on top. Decisions are rarely democratic. Christians have an entire ecclesiastical hierarchy to intercede between earth and heaven. And the capitalist/communist industrial organizations of production have highly authoritarian corporate and state managers that supervise work and reap most of its material benefits.

In contrast to these imperial societies, primitive people are like the ancient Greeks. They live in small communities in harmony with each other and with the dark earth. I am not suggesting these are perfect, utopian societies. Both the ancient Greeks and the American Indians did fight civil wars. And sometimes their behavior was no better than that of barbarians. But, in general, primitive people have a pantheon of gods that make it possible for them to live not in conflict but in cooperation with the world around them. Thus their understanding of nature is extremely sophisticated and profound.

But mix primitive people with those of industrial societies and there is a volcanic eruption. Disease, monotheism, top-to-bottom development, greed, and toxic technologies invariably bring about the extinction of the primitives.

The people of industrial societies have adjusted to ecological and other disasters to the point that they do not even see them anymore. Their ideologies have no place for ecological values because such values prohibit the spraying of the environment with deadly molecules or tolerating growing disease, cancer, dead wildlife. Ecological values also mean returning to the social organization and politics of a gentle culture, if we are to survive as caring human beings on a nurturing environment.

Now those who find this idea uncomfortable should look closely at two things: the hair-trigger that still keeps us from nuclear holocaust, and the ecological and social devastation of not only Latin America, Asia and Africa but the industrialized North as well. The nuclear terror means we can no longer trust the

scientists, businessmen, industrial managers and politicians that keep that terror going. And the disintegration of so much of the black, brown, red and mulatto world is a result not of divine intervention but of a deliberate interference by the white people in the affairs of "primitive" societies in the North and elsewhere across the face of the earth. White people still savage the North and the tropics for precious metals, water, wood, cash crops and wild animals. They strip entire mountains and river valleys for gold. They flood enormous chunks of beautiful and rich forest to make artificial lakes for hydroelectric power. They plunder millions of acres of virgin rainforest for timber, minerals and cheap hamburgers.

It would be a mistake, however, to think that just because we do not live in the deserts of hungry Africa or the ruined Amazon rainforest of Brazil, we can forget about the dying African or the destitute native American. The dying African or the hungry and impoverished indigenous people of the Western Hemisphere are the symptom of a sick industrial civilization on the verge of total breakdown. In the United States and Brazil, it takes a special effort to find these indigenous people because government keeps them in special boondocks to commit cultural suicide.

It takes just as much effort to realize that no human being in industrial societies escapes the sickening embrace of the toxins of those societies. This effort is necessary to overcome all the messages our "modern" culture sends us of our good fortune in being able to buy and throw away more and more TVs, chemicals, electricity, drugs, plastics, automobiles, fertilizers, insecticides, weed killers and a myriad of other products and poisons.

Re-creating a more gentle culture will not be easy because an entire generation of people the world over has been brought up to believe that it needs all those catastrophic atomic bombs, tanks, machine guns, agrichemical sprays, plastic bottles, paper cups, animal furs and factory farming.

The struggle for the re-creation of a culture which is gentle both to people and to our mother earth is only beginning. The Europeans have the "Greens" and the North Americans have a

variety of environmental groups trying to bring ecology down to the level of practical politics. Perhaps they may manage to restore some dignity to "primitive" people who are the original, the first people (*protogonos* in Greek). All of us would like to think we have something of the primitive hiding in our soul. At least I have no doubt in my mind that I am directly related to those proud, primitive people of ancient Hellas.

The beauty of the primitive is that it allows us to be sensitive human beings and to feel the pulse of the earth. We must get away from our real original sin — the sin of neglecting and punishing the primitive in ourselves, in others and in nature.

Yet science, an overwhelming cultural force that keeps industrial societies together, says that its practitioners have the right to control nature. They have the *only* way of knowing the truth, and the peasant inhabitants of the Third World have the option of becoming extinct or of abandoning their primitive culture for the "scientific" world created primarily by white people.

Few people in industrialized societies would relate *science* — something they perceive to be close to book learning — to the *peasant*, a person they imagine is dirt poor and stuck out there in the boondocks of starving Africa, Asia and Latin America. And the same people would be even less likely to believe that what the humble peasant does is within the best traditions of science.

This is because the citizens of industrialized societies have lost both their peasant roots and a real understanding of what science is all about. They think peasants are "backward" because they do not live in cities; because they do not speak languages we can understand; they do not drive pick-up trucks and they do not spray pesticides. Most people in "modern" societies also think there can be no science without labs, people in white coats, and plenty of machines. Thus cultural biases have created scientific enclaves, leaving most of the earth a scientific desert. Science itself is becoming for "modern" societies a new religion, in some instances as dogmatic as the religious beliefs it overcomes.

One idea that challenges this oppressive science is the idea of ecology — a Greek word meaning the study of *oikos*, the home, the

place that keeps a family together — because ecology looks at the intricate and delicate relationships between species and between nature and man. It is impossible to be a good ecologist and yet think the peasant is backward or stupid. But because ecology is a brand new, almost revolutionary science, ecologists are cautious. They still worship in the big cathedral of "official" science, and they still use the jargon of their colleagues in other science disciplines. Yet the fact that they ask questions no other scientists ask, the fact that they move freely in nature observing organisms the way they are in their ecosystems — is good, and may even be path breaking in bringing back to the memory of civilized people the beautiful ecological culture of the earth, the world of the peasant.

For the time being of course, most scientists, including ecologists, much less men of power and technology, do not see the peasants even if they are right before their eyes. Schooling, among other cultural experiences, sets them worlds apart. The peasant in most cases is quite illiterate while the scientist is a scientist because of perseverance through years and years of formal instruction. The first learns from listening carefully to his elders in the ecological school of nature; the second learns in the walled school of his society, absorbing carefully all the domesticated knowledge judged appropriate for his erudition and technical education. One is free to pick and choose from myths, stories, wonders, experience. The other must accept and make his own the lessons of his school. One carries the seeds of centuries of wisdom, every truth having been learned from living in balance with nature. The other memorizes "facts" developed only yesterday.

Does this mean that the peasant is closer to the truth than the scientists of industrial societies? In an ecological sense, yes. The peasant does not talk about facts. He talks about eons of wisdom tested in nature — something that is incomprehensible to the modern biologist. The latter has been taught to respect little more than the knowledge developed in the last hundred years or so. Even the word "modern" shows how arrogant our culture is, in the sense that we have put together an entire "scientific revolution" to explain the course of "modern science". Certainly there were

remarkable scientific discoveries in the 17th, 18th, 19th and 20th centuries of our era. But there was no "scientific revolution" against an established scientific tradition primarily because the dominant culture in Western societies for most of the last 2000 years was not one of science but one of religion and superstition.

However, the European exuberance with science as the pursuit of truth gave way by the 20th century, if not before, to "big science", patronized by governments and corporations as a source of political and economic power. The problem is that those who do science today have so "domesticated", "cut-up" and "institutionalized" what used to be beautiful inspiration in ancient societies that, in this last moment of the 20th century, throughout most of the world, science is large, complex, very expensive and beyond the reach of vast numbers of people.

Science was born eons ago, in "primitive" societies. It flowered in the ancient civilizations of Greece, the Arab World, India and China and is now afflicted with the pains of old age and pathological misuse. The industrialized nations that have used science to mechanize their civilization have also abused the discoveries of scientific knowledge in building technologies of destruction and war. Few of their smart people have the incentive and peace of mind or are allowed by their patrons to follow their curiosity and the beauty of the natural world, thereby creating gentle technologies and a gentle scientific tradition.

Lethal technologies are usually simple. They demand technical know-how and plenty of money. But once you create one you can duplicate it with other machines. The questions the technicians have to answer in building a toxic or killing technology are rarely demanding beyond the scientific-technical expertise of those technicians. They repeat and test something 1000 times until by accident or theoretical calculations they get to the explosive power of what they are seeking. Such a scientific process demands enormous concentrations of power. Single-minded scientists with advanced specialization in minute areas of knowledge, with laboratories, materials and money can usually create their weapon. But technologies that are both beneficial to people and do not cause

damage to the environment are usually complex because those who create them have to incorporate in their structure both highly sophisticated technical detail as well as a respect for the social and cultural needs of the community they are designed to serve. Generally, scientists developing beneficial technologies must have a broad education. But above all they must be humble human beings imbued with love and respect for other people and nature. The science these scientists practice is still young and has none of the ossification and poverty of industrial, capital-intensive science. By poverty, of course, I mean poverty in ideas, not lack of money. Official science has plenty of money. I could demonstrate the increasing senility and poverty of scientific culture by looking at the creation of the atomic bomb and other technologies of death and desolation. But that's pretty simple. We all know that the incredible waste in scientific talent and money that goes into the world's nuclear arsenal is just that — waste, toxic waste, poisoning our souls, building an enormous crematorium for the earth and its people. So I will not bother you with that madness. Instead I will argue that hunger is primarily a cause of the same poverty in scientific culture that gives birth to lethal technologies.

To get to hunger start with agriculture. And to see the world's most "advanced" scientific agriculture, examine what farmers do in the United States. And what farmers do in the United States is dictated by the most spectacular marriage of science and money the world has ever known. No other society on earth has spent so much time (now more than 100 years) trying to get the most out of an acre of corn. Yields of corn have risen spectacularly as a result of the systematic manipulation of the genetic structure of the plant, a ceaseless production of synthetic chemicals and extraordinarily fertile soil. All of this was done under the supervision of many universities, thousands of scientists in biology, chemistry, agronomy, and economics — and not a few billions of dollars. You would think that such concentrations of government power, research institutes, science, scientists, engineers, money and yields would have ushered in an agrarian golden age in America.

But that is not what happened.

Instead of a golden age, most of the farmers of America face a deep crisis threatening them with extinction. They are steadily going out of business so that, by the year 2000, no more than 50,000 of those who survive on farms will raise about 75 percent of North America's food.

The creation of a very small but extremely powerful class of very large landowners is an ominous development for the future of both democracy and science in the United States. Only a miracle or a revolution may savė American agriculture from complete disintegration before the few remaining family farms become part of the baronial possessions of agribusiness corporations. Social policies of land reform and revolutionary science are necessary to give power to the migrant farm workers who sow and harvest the crops — and to restore democracy in America.

CHAPTER THREE

The Agony of the Dispossessed: Mechanization and Migrant Workers in America.

The migrant people of America are people in flight, refugees from shrinking land and the roar of machines and the silence of insidious poisons, refugees from the thunderstorm of an entire society running into the future and leaving them behind, in the hollows of Appalachia, all over the Atlantic seaboard, all over the country and California.

The migrants are left behind to follow the sun. They roam the land "in search of crops to harvest and enough dollars to stay alive, if not to prosper or to live half right."[1] And it happens like this: "In June, with the advent of the strawberry harvest, the migrants stream into the area. Whites, Mexicans, and Negroes; men, women, children; old people, sick people, old men, and pregnant women leave their homes in Texas, Arkansas, Missouri, California, Florida, and other states where it has become impossible to earn a living. Lured by a Pied Piper's call to work, they follow the trail on foot, in secondhand cars, in trucks and on freight cars. The difficulties that they endure are staggering....

"Along the road an old 1928 Chevrolet truck is stalled. It carries the unmistakable signs of migrant ownership—a shelter on the back and household goods piled high. There are 10 persons—father, mother, six children, a married daughter, and her husband. They are in serious trouble — rear axle has given way. Out of a

reserve of $1.50 the son-in-law is given $1 to buy a secondhand axle at the nearest junk shop; 50 cents must somehow be stretched until work can be found. The mother is lying half-dazed on a mattress in the truck — she has been ill during the entire trip from Arkansas. The family hopes that 'she will get better when we stop traveling and start working.' To find work they have traveled hundreds of miles, 10 persons in one truck (one seriously ill), sleeping on the ground in all kinds of weather."[2]

The migrant people of America crawl out of the side roads, they scuttle like bugs to meet the needs of the earth. They are always close to the land. Like the American Indian, they live in the land. To destroy the soil or to force the migrant off the land is to dispossess him completely. "I talk to my land," said a migrant. "I ask it to be good; each year at the start I do. And each year at the end I say, thank you and amen. It's like being in church and talking with God. It's his land, anyway...If God sends sun and rain and He's already given you your land that's good, then there's just one more thing needed, and it's not hard to guess what it is: work."[3]

"And David went out," a migrant said about a fellow farm worker, "he was half dead, that boy was half dead, he was down on his knees crawling, picking cucumbers."[4]

Or consider the words of a young migrant woman reflecting as she did on the condition of her people: "It's another world for those poor migrant people. All day they're crawling on their hands and knees, and sweating, and chasing away flies or trying to kill ants. All day they're hearing their own voices, counting the baskets or the boxes or the bags, counting the money — and knowing it won't really go to them. And all day they hear the crew leader or the foreman or the grower: Keep moving, keep picking, stop loafing, stop wasting time, go, go, go, let's go."[5]

Or, better yet, consider what a non-farm worker said, a writer who in 1964 decided to live the life of a farm worker for just one day — a day in the life of a man with a hoe. "To chop at the tomato plants with a fifteen-inch hoe requires bending over almost double, and in only a few minutes, the sweat is pouring down my face. I soon fall behind almost all of the workers in the field: the end of the

furrow seems a million miles away, and it takes me a half hour to get there. The bus driver, who is now acting as straw boss, keeps an impatient eye on me. He complains that I am not thinning the plants enough, and he tries to show me how to move my feet so that I can stay bent over. But the Nisei foreman tells me to take my time and do the job properly. As I get to the end of the row, the muscles in my back, thighs, and calves ache from the strain.

"And so the day moves on, with the sun rising in the sky and the heat rising in the field. The furrows extend into an eternity of tiny tomato plants and dirt, and the short-handled hoe is an instrument of torture...."[6]

The migrant people of America love the land but they are landless. They have the toughest job on earth but they are almost always looking for work, penniless, stateless, and very hungry. They earn the little bread they eat with their muscle and nerves, thinking little about capital accumulation, imploring their gods to intercede on their behalf while many alien forces of control are slowly closing in on them.

"Migratory farm laborers," the 1951 President's Commission on Migratory Labor observed, "move restlessly over the face of the land, but they neither belong to the land nor does the land belong to them. They pass through community after community but they neither claim them. Under the law, the domestic migrants are citizens of the United States but they are scarcely more a part of the land of their birth than the alien migrants working beside them...As crops ripen, farmers anxiously await their going."[7]

The farmers wish the migrant farm workers would disappear the minute they are through with their work in the fields. The farm workers, like the peasants of most societies, are the shadows of the land owners' wealth. They are the permanent reminders of the harsh agrarian revolution in early twentieth-century America, a revolution that disinherited the small farmers, the family farmers. John Steinbeck captured the spirit of that historical upheaval in *The Grapes of Wrath*, a novel he wrote in 1939. But despite its fictional character, *The Grapes of Wrath* is not fiction. It is a gripping account of the suffering of the migrant people in the United States.

"And then the dispossessed were drawn — west from Kansas, Oklahoma, Texas, New Mexico; from Nevada and Arkansas families, tribes, dusted out, tractored out. Carloads, caravans, homeless and hungry; twenty thousand and fifty thousand and a hundred thousand and two hundred thousand. They streamed over the mountains, hungry and restless — restless as ants, scurrying to find work to do — to lift, to push, to pull, to pick, to cut — anything, any burden to bear, for food. The kids are hungry. We got no place to live. Like ants scurrying for work, for food and most of all for land...

"There is a crime here that goes beyond denunciation. There is a sorrow here that weeping cannot symbolize. There is a failure here that topples all our success. The fertile earth, the straight tree rows, the sturdy trunks and the ripe fruit. And children dying of pellagra must die because a profit cannot be taken from an orange. And coroners must fill in the certificate — died of malnutrition — because the food must rot, must be forced to rot.

"The people come with nets to fish for potatoes in the river, and the guards hold them back; they come in rattling cars to get the dumped oranges, but the kerosene is sprayed. And they stand still and watch the potatoes float by, listen to the screaming pigs being killed in a ditch and covered with quick-lime, watch the mountains of oranges slop down to a putrefying ooze; and in the eyes of the people there is the failure; and in the eyes of the hungry there is a growing wrath. In the souls of the people the grapes of wrath are filling and growing heavy, growing heavy for the vintage."[8]

The Grapes of Wrath was perhaps the best serious effort to explain to the American people why their family farmers were forced off their land by the rapid mechanization of American agriculture and why hundreds of thousands of American citizens were crowding the country's roads "ravenous for work, murderous for work." These moving people, always hungry, roaming the land, are still with us. What Steinbeck did with passion, with justice and much eloquence was to put the migrant farm workers in the proper context of American civilization and at the very core of the continuing agrarian and agribusiness revolutions.

Many people say that the growth of factories in the field to take the place of the family farmer was really inevitable and good. Millions have to be fed: "Agriculture is undergoing an epochal revolution." At least that's how a prophet of the coming brave new agricultural world saw the transformation of this country's agrarian institutions and way of life. He went on to say: "We are evolving from feudal and industrial agriculture to cybernated food production. Computers, remote control cultivators, television monitors, sensors, data banks can now automatically run thousands of acres of cultivated land. A couple of telefarm operators can feed a million people."[9]

Yet it is not easy to separate the poverty-stricken, landless migrant farm workers from the evolving structure of our major agricultural institutions. The migrant farm workers are themselves the remnants of what used to be a venerable institution in American civilization: Thomas Jefferson's "those who labor in the earth", America's family farmers. In the debate on the Homestead Bill in 1862 an Indiana Congressman noted what was at stake in the survival of the independent farmer:

"Instead of baronial possessions, let us facilitate the increase of independent homesteads. Let us keep the plough in the hands of the owner. Every new home that is established, the independent possessor of which cultivates his own freehold, is establishing a new republic within the old, and adding a new and strong pillar to the edifice of the state."[10]

And the North Carolina Land Commission said in 1923:

"It is quite conceivable that under capitalistic or corporation farming, greater gains might be secured than under a system of small individual holdings.

"It is quite inconceivable, however, that the...farmer would be as good or as efficient a citizen, that he would take as great pride in farming, that he would get as much contentment and happiness for himself and his family out of his home, or that he could develop as satisfactory a community for himself and neighbors as he could and would if he owned the house in which he lives and the farm he cultivates. The problem, then, is that of life on the farm, the

development of rural communities and the building of rural civilizations with which, after all, we are the most concerned...The late Governor Bicket said: 'The small farm owned by the man who tills it is the best plant bed in the world in which to grow a patriot...Every consideration of progress and safety urges us to employ all wise and just measures to get our lands into the hands of many, and forestall that most destructive of all monopolies — the monopoly of the soil.'"[11]

Senator Wayne Morse in 1959 was no less explicit about the key role of the family farm in American life and civilization:

"We talk about political democracy, but we cannot have it without economic democracy. We cannot have political freedom of choice for the individual without economic freedom of choice for the individual. Therefore, I say again today on the floor of the Senate, if I were limited to the naming of one thing only — which I think is the greatest guarantee of the perpetuity of our democratic form of government, what I would name would be private home ownership in the city and family-farm ownership in the country. On that type of ownership, I think, is dependent, more than we sometimes fully realize, our whole system of political and economic freedom of choice for the individual."[12]

And for Senator Gaylord Nelson in 1978 the family farm was still an important institution "created by the foresight and planning of the makers of America," but now "threatened by the corporate control of agriculture."[13]

Failing to look at reality for what it is, failing to realize that the good old family farm has for all purposes disintegrated, is another way of keeping our eyes shut to the terrible social consequences of that disintegration. The migrant farm worker is cruel yet living evidence of how far the farm decay has spread. In the clouds of the family farm mythology and in the ethereal efficiency of corporate agriculture, we work every day and we say that the gangs of moving, rootless farm workers will remain invisible, and we say that if our professors develop all that wonderful machinery to slice the soil, to pick the tomato, then everything must be good. But the farm workers refuse to disappear. Some of them even took the

University of California to court, challenging the University's use of public funds to create more labor-saving machinery to throw more farm workers out of work.[14]

The farm workers never had a chance in the multi-billion dollar agribusiness academic science complex of California.

Farm workers know. They know that the University of California and the other land grant universities are becoming agents of "hardship and misery for the poorest of the poor." They know that something is wrong when machines take command in the fields. They know that it is wrong to breed new varieties of food to meet the requirements of factory farming. They know that "mechanization grabs your dignity as well as your job."[15]

If by now all this sounds incredible, then consider what a medical doctor, Robert Coles of Harvard University, had to say about the terrible human condition of the migrants in our society. Coles spoke to a Senate Subcommittee in 1969, 30 years after Steinbeck's classic book:

> 1. Migrant children by the thousands not only live in poverty, go hungry, suffer from malnutrition, but, in addition, live incredibly uprooted lives — such as no other American children and few children in other countries, ever experience.
>
>   I am saying that constant mobility, constant moving and more moving, damages the physical and mental health of children in special ways — so that migrants present us with a special and awful problem even when compared to other underprivileged groups.
>
> 2. Migrant children and their parents are kept from the rest of us and have no place, however dismal, to call their own. They are uprooted, such as even the extremely poor in other countries are not. The children go from school to school, or often enough never go to school. Child labor is to be found, in spite of what the law says.

In a sense, they are stateless people — stateless among our states, and stateless in the European sense of belonging to no one, of falling under no one's protection, of being wanted by no one.

3. Just as there are specific and special psychiatric problems faced by migrants — extreme confusion, disorientation, depression and even suicide — there are specific and special medical hazards, the worst of which are the general absence of medical treatment and the general presence of pesticides, which are a constant danger to the health of the workers, and also their children, who often enough and sadly enough work near machines that deliver poisonous chemicals not only to crops but to human beings.
4. No group of people I have worked with — in the south, in Appalachia, and in our northern ghettos — tries harder to work, indeed travels all over the country working from sunrise to sunset, seven days a week, when the crops are there to be harvested.

   There is something ironic and special about that, too: in exchange for the desire to work, for the terribly hard work of bending and stooping to harvest our food, these workers are kept apart like no others, denied rights and privileges no others are denied, denied even halfway decent wages, asked to live homeless and vagabond lives, lives of virtual peonage...[16]

Steinbeck and Coles went straight for the heart of darkness. Steinbeck's California experience brought him face to face with the political might, agricultural wealth, and the rural upheaval of a land quite privileged in America's agricultural economy. And Coles' experience brought him to follow the migrants, to live with them, to eat with them, and to listen to their sorrows and joys and problems and hopes for years. Both wrote about migrant poverty with the hope that the country would do something about it.

Both men understood the vulnerabilities of power and powerlessness. They studied fear. And fear was in the hearts of the mighty farmers. And fear was life for the terribly fragile migrant, so much so that a migrant mother had to tell her children they were alone, they should never expect a smile from the farmer's technological, alien world. She even had to tell them that they should fear "policemen, firemen, sheriffs, people who wear business shirts, people who are called owners or bossmen or foremen or managers. She tells them that no, the rest rooms in the gas stations are not to be used; better the fields or the woods. She tells them to watch out for just about anyone who is not a picker, a harvester, a farmhand, a migrant worker. She tells them why sometimes, when they are driving North with others in other cars, the state police meet them at the state line and warn them to move, move fast, move without stopping..."[17]

Despair usually follows the path of people running with fear. And despair sometimes hits those men who know why the migrants are running for their lives. Coles was such a man. For close to two decades he was a keeper of that terrible secret. At the end of his testimony before Senator Mondale's Subcommittee on Migratory Labor on July 28, 1969, Coles exploded with pain. He looked at the Senators and said: "There are moments, and I believe this is one of them, when even doctors justly have to throw up hands in heaviness of heart and dismay and disgust and say in desperation, God save those children and, for allowing such a state of affairs to continue, God save us, too."[18]

CHAPTER FOUR

The Apotheosis of Poison: Pesticides and People on the Land

There is no doubt about it: in the United states in the last few years of the 20th century there are migrant workers by the hundreds of thousands. Some of them stay in one or two places, moving perhaps within a crop region when the earth brings the harvest. But most of them move all the time with the season. They are everywhere, invisible men, women, and children, living on the edge of towns, on the edge of time. Their protective coloration makes them one with the green, lush earth. One has to get close to the migrant farm worker, talk to him, get to know him and his poverty, even taste his malnutrition to understand that this human being has lost his freedom. And we must also remember that there are Mexicans by the millions ready to escape their ancestral hunger to join and replenish the ranks of "the wretched of the American earth."[19]

That the migrants still migrate, that they still barter their lives should surprise no one. The machine and its corporate masters are subsidized by Federal and State governments, and for knowledge they can always turn to the land grant universities. In this grand scheme of things the migrant farm workers are really not much more than guinea pigs: landless and dispossessed, they are also the first human beings who come into contact with the wrath of poisons, often lethal, sometimes invisible — pesticides, new syn-

thetic organic chemicals, deadly in their ability to kill pests, precise in their disruption of the ecology of the land, deadly to all life in some ways. "In a real sense we shouldn't call them pesticides...we should call them `biocides' because that's what they are."[20]

On August 1, 1969, Jerome B. Gordon, President of the Delphic Systems Research Corporation, told the US Senate that those poisoned by toxic pesticides were the victims of a "carelessly regulated agricultural chemical industry", who had also to put up with "some of the most blatant forms of arrogant bureaucracy in this country. Yet their plight can be multiplied several hundred thousand-fold in the unwritten, unspoken anguish of the nation's farm workers." Put together farmers and migrant farm workers and suburban home owners, Gordon said, and the result is "uncounted thousands" of people who are "fatally overcome or seriously disabled" by "deadly, nerve agent" pesticides.[21] And when it comes to migrant farm workers, Gordon stressed, then pesticides combine with these people's powerlessness to form a major tragedy.

"The pesticide problem would appear to be the literal apotheosis of the migrant farm workers' dilemma. These people are prey to the most unspeakable of occupational health hazards — death through nerve gas asphyxiation, and yet they are unprotected by safety legislation in all states save California. They have no recourse to Workmen's Compensation medical income benefits in almost two thirds of our country. They can't even inspect public records in states where they exist like California to ascertain whether existing pesticide rules have been violated. Employers won't even recognize their right to safe and healthful workplaces — a right purportedly guaranteed by every state industrial accident commission in this country to every working man and woman, as a 'bargaining' point. Then what we have is a class of workers who rival the 'helots' of ancient Sparta who were slaughtered at the whim and discretion of the warring Spartan landowners."[22]

One may disagree with Gordon's style of arithmetic, but there is little one can do to challenge what is central to his thesis.

One must also sadly admit that the passage of time has not exactly brought much that may even remotely be called "improvement" in the lives of these people. In 1975 a researcher discovered that 70 per cent of 1416 California farm workers had never heard of Workmen's Compensation Insurance, 20 per cent could not understand the warning put on pesticide labels, and their "injury level" was "several orders of magnitude greater than the injury rate reported from Doctor's First Reports."[23] And yet government experts on farm workers still insist they know very little about farm workers.

In late July 1979, I was at a meeting of the US Environmental Protection Agency (EPA) where one group of the EPA academic advisors told their host — the Health Effects Branch of the Hazard Evaluation Division — that should the Agency become serious about the safety of the farm workers then it may as well go ahead and ban all pesticides. At the same time those professors spent a good deal of two days telling their EPA hosts how little they knew, how little everyone knew, about farm workers and pesticides. But pressed by my questions about the incredible gap between their consulting interests and services to EPA on farm workers, and the sort of desert in academic research and interest in farm workers they took so much pain to describe, the professors in essence said: "Neither we nor other scientists in the land grant universities care to send graduate students, or anybody else for that matter, to study the farm worker. We know his living conditions are bad. But we also know that the agricultural establishment, especially agribusinesses and pesticide companies, want us out of the farm worker's way. And that's good enough for us."

This unethical attitude makes a mockery of science — particularly science at people's universities, the public land grant colleges in America. These scientists ought to be reminded of what Reverend Bryant said in 1968 about the migrant farm worker: "If we're going to say that the health of an industry is more important than the value of the human life, this sort of thing can catch on and eventually encompass all of us. We have to be concerned about him, because he is us."[24]

Yet human safety, the safety of several hundred thousands of farm workers and several billion pounds of pesticide poisons spread yearly in the very environment where these people walk, sleep, breathe and touch, will not score any permanent victory unless each step of technological protection society chooses to impose on itself is also accompanied by an even more stringent step of philosophical protection. What I mean is this: those who make pesticide policy will have to understand that the American people are becoming more and more disenchanted "with massive pesticide applications."

"The budworm dilemma," said an editorial writer from Maine, "is more than entomological. There is the human equation. Farms, fields, apple orchards, apiaries, water supplies and people have been accidentally doused with budworm pesticides...Amid the wilderness splendor...there is something audacious and profane about an airplane dropping red and yellow clouds of chemicals on everything."[25]

There is also something audacious and profane when those deadly chemicals reach life even beyond the wilderness.[26] Listen to Glen W. Schaefer, a Canadian mathematical physicist and biologist and distinguished ecological thinker, explain just why this is so: "It's becoming clearer that insecticides lead to all kinds of extreme problems. The more one sprays and the more one kills, the more pests there are the next year. Here's a sample calculation: many female insects lay about two hundred eggs. In order to keep the population just ticking over, only two of those two hundred eggs need to survive to adulthood to create another fresh female with two hundred eggs. Ninety-nine per cent mortality is provided for. Man comes along, spraying, and the survivors are now able to live in an environment with less competitors, more food for each, and with some chemical resistance.[27] Those few survive better than if you had left everything alone, and they are left as adults, say. This increases the population by 50 per cent, such is the delicate balance of nature. Thus nature protests very loudly when chemicals — insecticides, herbicides — are introduced. I see a parallel here with

the human body and the doses of chemical drugs we inflict upon it. Just as less drugs are now being recommended by leading medical scientists — if healing is the objective — so we should treat the body of nature. I've found ways of using minute amounts of chemicals — just like old-fashioned homeopathy — but even that, I'm convinced, will have to stop sooner or later because there's no way in which man will ever be able to control nature by these means. To me they are an imposition, not in line with the destiny of man."[28]

CHAPTER FIVE

The Family Farm and Ecological Disaster in America

American agriculture is perhaps the grandest experiment ever to bring nature under absolute human control. The plight of the farm workers is the first symptom to show that this massive experiment is itself out of control. Now in the last few remaining years of the 20th century, we also see that more and more "family farmers" are being pushed into the decay of the farm workers.[29]

Secretary of Agriculture Bob Bergland lamented in January 1981 that farming in the United States was changing rapidly — and with many of those changes not in the public interest. He said that by 1974 "farm numbers...were down to 2.7 million and the average farm size was upto 388 acres. In the previous five years, every size category of farm had lost members except those under 10 acres and over 1000 acres. Sixty-two per cent of the farms were owned by persons who worked no other land. The proportion of full tenants was down to 11 per cent — but probably due in large part to the mechanization of such crops as cotton, which took sharecroppers out of farming in the South. In between were many of the most prosperous, large-scale farms: about half their acreage owned, about half rented.

"The continued availability of irrigation water in the High Plains, and the control of publicly reclaimed water in California on farms far larger than the 160 acres set down in the original water

policy statute, were becoming major issues...[By 1978] farmers lived on fewer than 2.5 million farms and represented less than four per cent of the population. The largest 20 per cent of those farms by sales accounted for four out of every five dollars worth of food and fiber produced. Several hundred of these farms were selling more than $10 million worth of products a year...The success of our agriculture is true, but it is also true that, by 1978, about 7.7 per cent of the households in America owned all the farm and ranch land. Of those households, 62,260 — the population of a medium-sized city — owned three of every 10 acres. How did this come about, in a nation that came into being with one of its principles being the widespread ownership of property? Ownership of property is still one of America's most cherished dreams, but this was dramatic evidence that few were achieving it, if their dream involved farmland. What is more, about 70 per cent of those who owned farmland in 1978 were over 50 years old."[30]

These old farmers can still farm primarily because of machines. Agricultural workers in the 1950s contributed something like 12.5 billion hours of work. In the 1980s, all farm work was done with about four billion hours of labor. Interestingly enough, the land harvested in these last thirty years has not changed that much. In the 1950s, 335 million acres of land produced all the crops of a country with 160 million people. The harvest from 55 million acres of that land was exported. In the 1980s, the United States, with a population of 230 million, was using about 360 million acres of land to grow its food. And close to 130 million acres of that land raised food for foreigners.

Also, the number of tractors doing most of the hard work at the farm did not change very much: from 4,100,000 in 1953 to 4,600,000 in 1983. But something did change in this time. And that was mechanical power. The farmers of America in 1953 commanded tractors of 115 million horsepower but in 1983 that enormous strength had more than doubled to become 278 million horsepower.

Of course, this great transformation did not take place in the abstract. The rapid increase of mechanical and chemical power —

the value of machinery and chemicals jumped from 25 per cent to more than 50 per cent of the resources used for farming in the last 30 years — led to a rapid multiplication of those who left the land. Thus, from the 1950s to 1980s more than 15 million men, women and children abandoned their homes in the country for the cities. The increase in farm size and the use of ever larger and more powerful machines changed a way of life to an industrial system of production: the care of human beings for the land, the tradition of growing a variety of crops, the beautiful craftsmanship and ecological wisdom of the small farmer, all of which maintained healthy communities in the countryside, had to make room for giant factories in the field producing one commodity, mining the land and water and the environment. Agricultural factory farms today stretch as far as the eye can see, their huge machines and aircraft dominating the lonely landscape.

And yet not merely the size of the farm and the enormous power of tractors, but the very nature of farm technologies maybe another Achilles' heel in this super-sophisticated giant agriculture. Insects, weeds and disease, for instance, destroyed 31 per cent of the crops worth 27 billion dollars in the 1940s. In the 1980s that damage was hovering around 80 billion dollars since "pests" and diseases wiped out 34 to 37 per cent of the farmer's crops.

One such "pest", the Colorado potato beetle, is practically indestructible precisely because the farmer's most advanced technologies, pesticide chemicals, changed that beetle's genetic makeup, forcing it to become a tiny insect machine. And there are now some 500 anthropoids (insects, ticks and mites) that resist the killing power of one or more insecticides.

More than 25 different kinds of beetles, bugs, caterpillars and mites eat their way through cotton in 36 countries because, like the Colorado potato beetle, they use the farmer's sprays to build up their own defenses against an incredible variety of acutely toxic poisons.

Practically all of the *Anopheles* mosquitoes capable of transmitting malaria to people are immune to the insecticide poisons thrown against them in 84 countries. Malaria is coming back with

debilitating and often fatal consequences for hundreds of thousands of human beings in Asia, Africa and Central America.[31]

The other great handicap of giant agriculture is that the farmer, getting on in years and calling himself a "grower", is no longer efficient in what he does because, in many cases, he spends too much borrowed money for his machines, petroleum, chemicals, land and information. This means that when he harvests rice, for instance, he barely breaks even — each calorie of what he grows is already mortgaged by a calorie of technology and energy he uses for his production.[32] That's why many of these farmers are going out of business so fast. And the only "farmers" who make it are large corporations — linked both to the science of the land grant universities and the subsidies of public works and legislation — which convert their rural real estate and capital into monoculture factories, ploughing huge tracts of land into profitable cash crops.

Such monoculture factories contaminate God's water of mercy — groundwater. For example, from about the late 1960s to 1980s, both the raising of cattle and corn boomed in the fertile Big Spring basin of northern Clayton County in northeastern Iowa. The number of cattle increased approximately 40 per cent. But then during the same period something else hit the ceiling. The amount of nitrogen fertilizer the farmers of the Big Spring basin spread over the land rose about 250 per cent. That profligate practice had consequences.

Corn can use just so much nitrogen fertilizer; the rest is simply lost in the environment. And in the case of these Iowa corn farmers, they wasted 50 to 75 pounds of fertilizer per acre. That, of course, is plenty of money to throw down the sink especially when that money comes from people, many of whom farm on credit. But the trouble with giving corn more nitrogen than it can use in the Big Spring basin is that the extra 50 to 75 pounds from each acre goes down to the groundwater. Once in the water, nitrogen fertilizer becomes nitrate, a chemical potentially toxic to human beings. And from the 1960s to 1980s, the nitrate found in the water of the Big Spring basin increased 230 per cent.[33] That is, the more nitrogen fertilizer the farmers fed their corn, the more nitrate ended up in

their drinking water. Add to this, some of the insecticides and herbicides these same farmers sprayed on their corn also sank down to their drinking water and the situation — both ecological and social — becomes pretty bad.

Is there any wonder that farmers like these are not able to accomplish what they should be doing — maintaining the fertility of their soil and the productivity of their labor and investment? Pressures to produce as much as possible leave no room for the care of the land. And they falsely believe that the mountains of food they force out of the land will go to feed hungry peasants.

But the peasant in the Third World rarely sees American food. He persists in his ancient ways alone, often against terrible odds. The peasant goes on with life, raising not much bread from his strip of land, yet everything he does is superbly efficient. For instance, for each calorie of work the Filipino rice peasant puts into his tiny farm, he harvests 16 calories of food. Contrast this to the rice farmer of Louisiana who just about gets back what he puts into that huge farming marvel of science, technology, land and chemicals.[34]

CHAPTER SIX

Keeping A Watch On The Clouds: Peasant Wisdom and Its Destruction

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The "modern" farmer has much to learn form the peasant who practices a gentle if "primitive" form of agriculture. The peasant doesn't try to squeeze every ounce of fat from the land because experience has taught him that such exploitation would hit him back with a vengeance. His land is alive with myriad creatures — he is certain of that. He has seen wholesome food coming to him year in and year out when he applies the manure of his animals over the good land, letting some of the soil to rest, always planting a variety of crops, spreading the risk of famine thin, praying only to his local gods for sunshine and rain. Thus he puts back into the soil everything he takes out, guaranteeing the permanence of what he does. And what he does is more than just raising crops. Agriculture for the peasant is life, religion, civilization.

"Whatever [the Trobriander] might appear to others," said the famous anthropologist Bronislaw Malinowski in *Coral Gardens and their Magic* (1935), a book about the inhabitants of the Trobriand Islands of Melanesia located off the eastern end of New Guinea, "to himself he is first and foremost a gardener. His passion for his soil is that of the real peasant. He experiences a mysterious joy on delving into the earth, in turning it up, planting the seed, watching the plant grow, mature, and yield the desired harvest...the Trobriander is above all a gardener, who digs with pleasure and

collects with pride, to whom accumulated food gives the sense of safety and pleasure in achievement...To the Trobriander all that is lovely to the eye and to the heart, or — as he would put it more correctly — to the stomach, which to him is the seat of the emotions as well as of understanding, lies in things which promise to him safety, prosperity, abundance and sensual pleasure."

The peasants use their hands and brains. They resort to a knowledge which has come down to them not through books but by word of mouth, the distilled wisdom of centuries of observation, dialogue and social experimentation. So the peasant still follows the admonition of Euripides not to trifle with divinity: he knows he is the heir of customs and traditions hallowed by age and handed down by his forebears — a living world not easily toppled by tractors and seemingly profitable, science-made varieties of corn, wheat, rice.

These people of the land use the tools of life; they don't manufacture life. Their umbilical cord is still with the earth. That is why the transfer of the white man's agriculture with its enormous and expensive machines and chemical technologies and vulnerable seeds right into the peasants' backyard is so destructive a process even though it is done sometimes under the best of motives.

"What a sad joke," said the ecologist Howard T. Odum in his 1971 book, *Environment, Power, and Society*, "that a man from an industrialized agriculture region goes to an underdeveloped country to advise on improving agriculture. The only possible advice he is capable of giving from his experience is to tell the underdeveloped country to tap the nearest industrialized culture and set up another zone of fossil-fuel agriculture. As long as that country does not have the industrial fuel input, the advice should come the other way. The citizen of the industrialized country thinks he can look down upon the system of man, animals and subsistence agriculture that provides life from an acre or two in India when the monsoon rains are favorable. Yet if fossil and nuclear fuels were cut off, we would have to recruit farmers from India and other underdeveloped countries to show the now affluent citizens how to survive on

the land while the population was being reduced a hundredfold to make it possible."

Exactly. We should also have learned something from our own Western "development". Listen to Pierre-Jakez Helias talk about the life and disintegration of Breton peasant civilization in France — only yesterday. "And it was a mistake," he said in his beautiful book, *The Horse of Pride*, "to believe that machines could replace the men or even the horses. There aren't many horses left because there aren't many foremen left to care for them; there aren't many foremen left because they have become plasterers or pavers or workers on an assembly line in some city; they took those jobs because they would be paid by the hour and no longer by the year or by the sunny day; they were paid by the hour because God's creature is moving farther and farther away from Creation. There is no longer any visiting among neighbors, no longer any community. I know one man who was reduced to talking to his tractor, as he had once talked to his horse. But the tractor didn't neigh: it never brought forth a foal. And many young men, all holders of rich land, will never have children because, since the women were the first to leave, they can't find anyone to marry. A civilization is disintegrating by slower degrees in an atmosphere of general indifference."

But unlike the quiet disintegration of the Breton agrarian people in France, the peasant in many corners of Latin America, Africa and Asia does not simply fade away in silence. His land is often stolen from him but he comes back to it; he is an expert in invading his own land despite the bullets hiding behind the enclosures.

He remembers too that when city doctors, lawyers, land speculators and other old feudal landlords cursed the white man, who in great shame and defeat was making a graceful retreat from colonies in the forties, they cursed him for his ruthless colonial oppression. But the peasant did not hear a word of abuse against the plantation — the white man's legacy of an experimental garden of scientific agriculture, a huge farm with machines, the best white techniques of environmental manipulation, acres and acres of

growing one fruit, one crop which was like gold in the world market.

The peasant noticed that the powerful people of his country treated their cash crop plantations with care. He even remembers listening to the radio and seeing on city walls that plantations were good because they made it possible for the government to get dollars which were so terribly necessary for "industrialization", something which the peasant was never clear about, something that his bones told him was pregnant with trouble for him personally. For the peasant could see that the departure of the white man did not really do away with the abysmal social inequalities all around him, in the farm, in the ghettos of the cities. And what was most alarming to the peasant, because it threatened him with extinction, was the realization that never before was he becoming as hungry as now that his country had its own army and flag.

CHAPTER SEVEN

Maize is Less Nourishing: Trashing Third World Agriculture

It was at this critical juncture in the life of the poor countries, when political freedom seemed to go hand in hand with the threat of hunger, that the efforts of the Rockefeller Foundation's agricultural research in Mexico were successful in increasing the yield of wheat and corn. And for a brief, deceptive moment it appeared as if those new high-yielding varieties of food crops would put an end to hunger without the slightest disturbance in the feudal dominions of those few who controlled the best and most of the farmland.

The science made possible by America's princely house of philanthropy was pregnant more with hegemony than food, precisely because those of the Rockefeller Foundation who nurtured it made certain that its philosophy, techniques and goals were good enough for immediate, practical results: increasing the wealth and power of men who had wealth and power. For science, like a human being, can and usually does absorb the values and fears of its environment so that, depending on the tenderness and love or harshness and deprivation of childhood, the young adult, and the emerging ideas and practices of science, will become a useful, sterile, or destructive member of the republic of men and knowledge. And with the Rockefeller Foundation, science had such an upbringing that it had no choice but to serve the imperial schemes of its masters—a family which as early as 1900, was looking at both

the United States and the rest of the world as mines for the extraction of wealth.

"The South," said the General Education Board, the first foundation of the Rockefellers, in 1902, "with its varied resources and products has immense industrial potentialities, and its prosperous future will be assured with the right kind of education and training for its children of both races...the Negro must be educated and trained, that he maybe more sober, more industrious, more competent." And so Rockefeller money set out to make the backward underdeveloped Southern United States a plantation for the feeding of Northern capital. Rockefeller medicine men fought hookworms, yellow fever and malaria because that was the only way to get the "germ of laziness" out of the people creating wealth for the Northern owners of the mills in the South.

At the same time, Baptist Christian missionaries spread the Rockefeller gospel among the barbarians in Latin America and Asia. "Quite apart from the question of persons converted," said Frederic T. Gates, the Rockefellers' spiritual advisor in 1905, "the more commercial results of missionary effort to our own land is worth, I had almost said a thousand fold, every year of what is spent on missions...Missionary enterprise, viewed solely from a commercial standpoint, is immensely profitable. From the point of view of means of subsistence for Americans, our import trade, traceable mainly to the channels of intercourse opened by the missionaries, is enormous. Imports from heathen lands furnish us cheaply with many of the luxuries of life and not a few of the comforts, and with many things, indeed, which we now regard as necessities...our export trade is growing by leaps and bounds. Such growth would have been utterly impossible but for the commercial conquest of foreign lands under the lead of missionary endeavor. What a boon to home industry and manufacture!"[35]

Such missionary endeavors did not just sell a powerful, all redeeming, white Baptist Christian God to the heathen of China, Brazil, Columbia, Panama, and Puerto Rico. As in the American South, the civilizing mission of the Rockefeller men was to break down the resistance of all those backward people to the encroach-

ing industrial capitalism of the white man. When the Rockefeller missionaries could safely peddle white medicine in the jungles of the Philippines, or when the Mexicans invited the Rockefeller scientists to teach them how to grow food, those peasant cultures opened a huge window on their mind. They convinced themselves that those foreign ways were good, even profitable to a small number of them, not realizing that what was taking place in that context was a radical, perhaps irreversible mutation of what had kept them together for centuries.

When Seaman Knapp of the General Education Board said in 1907 that "if we could teach the farmers who are now tilling the soil how to till it well — we should soon be able to buy any country that we take fancy to", he knew what he was talking about, and he was right. To farm as the foreigner tells you is to submit to the superiority of that man's culture which also means that you better organize, read, and do things exactly as your science advisor says or else you starve. And what about the humiliation of abandoning eons of wise, scientific practices for a science put together in a hurry, a science untested by experience, new, ephemeral, greedy? This could not possibly enter the calculations of the Rockefeller men and other apostles of white science.

"There is certainly nothing inherently evil," wrote E. Richard Brown of the University of California in the *American Journal of Public Health* of September 1976, "in increasing productivity by improving people's health. When such measures enrich the lives of the recipient peoples and enable them to develop their own countries in ways they determine to be in their best interests, such health programs are very much humanitarian. The Rockefeller Foundation programs, however, were only secondarily concerned with the interests of the native populations. Their primary goals were to enrich plantation, mine, and factory owners and ultimately foreign imperialist powers — or in the case of the American South, the largely Northern capitalist class. In a clear example of ideological thinking, the interests of the native populations were assured to be identical to the interests of American corporations. Thus these programs were not devoid of politics. By their definition of health

as the capacity to work, by their technological content that weakened traditional and agrarian cultural autonomy, by historical conditions that assured that economic development (when unfettered by national independence struggles) would profit foreign capitalist classes, and by their undermining of forces seeking economic and political independence, the Rockefeller public health programs were loaded with political and economic values and consequences."

It was this loaded, heavy-handed science which the Rockefeller Foundation grafted into each seed of wheat and corn throughout the non-white world, so that by 1960, it covered about 90 per cent of the wheat land of Mexico. And not much later, Mexican wheat helped India and Pakistan raise more and more food in larger and larger areas. By 1971 those high-yielding wheat and rice technologies had found their way into no less than seven per cent of the total cereal cropland of capitalist Asia, Africa, and Latin America. No wonder that even before 1971 the American sponsors of these ingenious tricks (of forcing more fat out of the good earth) told their friends in Latin America and Asia that what they were witnessing was no less than miraculous, no less than a "green revolution".

But these non-white societies paid an exorbitant price for falling in love with white science. They lost their soul. They lost their freedom. "There's no hope of freedom for us, my friends," said Latin America's Miguel Angel Asturias in his 1946 book, *El Senor Presidente*. "We must put up with this as long as God wills. The men of this town who desired their country's good are far away now: some of them begging outside houses in a foreign land, others rotting in a common grave. A day will come when no one dares walk the streets of this town. Already the trees don't bear fruit as they used to. Maize is less nourishing than it was. Sleep is less restful; water is less refreshing. The air is becoming impossible to breathe. Plagues follow epidemics, epidemics follow plagues, and soon an earthquake will put an end to us all. My eyes tell me that our race is doomed! When it thunders, it is a voice from heaven crying: You are evil and corrupt, you are accomplices in wickedness! Hundreds of men have had their brains blown out against our

prison walls by murderous bullets. Our marble palaces are wet with innocent blood. Where can one turn one's eyes in search of freedom?"

And then in the countryside, where land gives birth to life, new men with medicines came to tell the peasants they had a better, more certain way of raising a lot of bread. Machines, fertilizers, pesticides, water, complex and expensive genetic manipulation of foodcrops had to be used together so that more could be harvested from an acre of land. And the white machines and science made the landowners more powerful, more greedy for the land of the peasant. And the machines and the science of the white man worked their magic in the world of black Africa, the plantation empires of the mulatto people of South America, the rice kingdoms of yellow Asians. These foreign gifts of knowledge raised the arrogance of a million landowners to that of a million little tyrants who now proclaimed themselves to be white people — looking at the peasants with even more contempt.

These new agribusinessmen invited their science brothers from North America and Europe to come and teach them how to sow their land with machines and scientific crops; to tell them how to turn their *haciendas* into Iowa corn fields. The white agricultural missionaries came with the blessings of the petrochemical magnates and the money of the World Bank. They created little white agricultural research institutes so they could indoctrinate the natives on the miracles of depopulating the countryside so that huge tractors and other monstrous mechanical beasts could crush the earth with pregnant fat seeds and poison. And the day did dawn when all this came to pass.

Now many of these black and yellow and brown societies have adopted not a few Iowas but many, not a small amount of deadly pesticides, but a cascade, not a trickle of gasoline, but a flood. Not a few Americans and Europeans are having the time of their lives in little villas, near their research oases, experimenting with all sorts of crazy ways of making corn, rice, and wheat and beans and potatoes to give more, only to see the progenies of that mongoloid science disappear into the mouths of voracious bugs or

be devastated by virulent diseases. They are playing a never ending dangerous game with the biological treasure of millennia so that in the end some money-making, gasoline-thirsty plant can capture the hot tropical sun forcing traditional crops into extinction. This is the tragic story of the bananas of Guatemala, golden fruit for America's tables.

The United Fruit Company grabbed them from the people of Guatemala decades ago in a robbery of science and land and hope that sowed the seeds of social disaster in that unfortunate country. Seemingly innocent white science in an Indian-mulatto culture can have all sorts of repercussions. Miguel Angel Asturias, a son of Guatemala, put it like this in his book, *The Green Pope*:

> The family of mulattos with all its children clung to their small plot planted with banana trees. But it was useless. They were pulled off, they were trampled on, they were broken up. They clung to the house. But it was useless. The house burning, with all its clothes, saints, and tools. They clutched at the ashes. But it was useless. Twenty fierce men under the command of a redheaded foreman chased them away with whips. The old mulatto women, streaming with tears, rolled around as if they were being tickled, shouting, shrieking, trying to defend themselves with their castor-bean hands, wounded, beaten, bleeding, under the rain of lashes...
>
> Their orphans, more docile than their parents, became involved in the work of the plantations. Another of the many advantages of liquidating rebellious people. Their deaths produced many workers...
>
> Through the treetops, trimmed by pruners and gardeners, like heads of hair, there appeared the roofs of the buildings, crowned by water towers.
>
> But there too...as if sifted out, was the universe of corn and beans, bird and myth, jungle and legend, man and his customs, man and his beliefs.

> ...A different god was arriving: the Dollar, and a different religion, that of the Big Stick.

The fire of the new religion — the almighty buck, the machete, peasant sweat and scientific and mechanical instruments to manipulate the earth — spread like a plague over the world's countryside. The missionaries of checkbook seeds and science were lying when they called their bizarre genetic harvest revolutionary. And that lie was tragic for it heaped tons of dung on human freedom and the idea of revolution. It said, in effect, to hell with millennia of wisdom and sanity in the precise, scientific ways the peasant raised his bread without wounding the good earth. Now, the apostles of tractors, poisons, enclosures and cash crops said, the only thing that mattered was how much you could mine from an acre of land — and they had the recipe for getting the earth pregnant with fat harvests. That, they said, was revolution, green not red, but revolution nevertheless. They dangled in the peasant's eyes more piasters, more wealth if only he would bond himself to the purveyors of gasoline, seeds, fertilizers, pesticides and bad advice.

Sure, some peasants did make good with the science, materials and high-yielding crops of the foreign white scientists. But at what a terrible cost for the land and the people of the Third World! Each time these white people cross their borders, they set more and more of the world on fire, particularly the world of the peasant.

In the last four centuries or so, the people who ate the peasants alive in France, England, Germany, Spain, Portugal and Holland took it upon themselves to make the rest of the world like Europe. That explains why the white people of North and South America, Australia, New Zealand and South Africa are where they are. They are the great great grandchildren of Europeans who brought fire, the sword, the gun and the Bible — in that order — to the people (Indians, aborigines, Eskimos and Boatmen) of the "New World". And this was the second great catastrophe in world history.[36]

The European invaders were all too real. And when they moved into a new place they made the simplistic and dangerous

calculation that the only thing different about that new place was the distance from their metropolis. They took everything they had with them — house designs, crops, animals, religion, education, guns. If the "natives" had a good piece of land, the Europeans stole that piece of land from them. Or the Europeans put the natives to work for them in the mines, plantations and in a thousand other ways. But when the indigenous people said no to the white men, there usually followed protracted warfare during which the Europeans with their guns would either slaughter the natives completely or push them into the bush or some kind of "reservation".[37]

Now those natives, the peasants and the pockets of primitive bushmen, aborigines and Indians make do the best they can, sometimes playing the games of the encroaching industrial state, but, most of the time, paying the price of development. Powerful people steal their land. And then with the money and science of white strangers, the native proponents of industrialization create temporary oases of white plantations, factories mining the land for profit. These plantations can only last for so long because they do not belong there. It is one thing to work India-rubber in the virgin forests of Zaire, and quite another to grow cash crops on the fragile red earth of East Africa or Amazonia. Land in these vast regions cannot tolerate heavy machines, naked surface, poisons, one crop. The sun bakes that soil into stone.

But it is not only that nature itself rebels under stupid conditions of exploitation and misuse. The peasants who lose land to the rancher next door are angry people. They hate those who grabbed their tiny farms. And they hate those who helped the ranchers — white bankers and white scientists who try to reproduce their way of life so far around the world, in the jungles of Latin America, in the plains and forests of Africa. And they are not too dumb to figure out that most of what comes out of those "scientific" plantations, ranches and large farms goes to the supermarkets of rich people far away from home. So, they say, why did they steal our small strips of land? In order to fatten cows for North Americans and Europeans? And what about us? From where are we going to get our next loaf of bread?

CHAPTER EIGHT

Hunger and Science in the Third World

Food, the sweet and tasty stuff that keeps us going, is life itself. We eat plants and we eat animals and offer sacrifices to the gods for that food. Take that food away and a hideous process of self-destruction begins. Our body consumes itself in the midst of terrors and pains of hunger, a starvation strong enough to cannibalize our own flesh and spirit. We either die emaciated and weak or survive with the stinking taste of death in our teeth and soul.

No matter what the outcome of lingering famine is, the survivors are marked for life. Thus hunger is the ultimate violence. It is a systematic attack on the biological resistance of a human being and it is a simultaneous crushing blow against that human being's integrity. A hungry man sees the world turned upside down. He looks at other people with fear and hatred. He has no time for morality, art, music, books and ideas. His head is exploding with anger, revenge, murderous thoughts, pain, exhaustion.

If hungry people became hungry because of war and other calamities, there is at least the prospect for recovery. But the millions of human beings devastated by famines in the last years of the 20th century are, in most cases, victims of man-made hungers. Now how is it that, in a world boasting of its scientific culture, and even "miracle" crops, there's so much famine?

The reason for this tragic reality has much to do with the culture of the white people, the scientific culture itself. This is because the culture of white people, living in the northern, temperate half of the earth, is moving all over the societies of the southern, tropical half of the earth. These southern societies are black, mulatto, red and yellow. But the difference between these two halves of the world is more than just the skin color of people.

These vast regions have different climates, vegetation, animals and other forms of life. In a sense, they are different earths with their own idiosyncratic, complex and vulnerable ecological systems on the basis of which human beings and other creatures have developed rich societies with customs, traditions and culture. And it is precisely because of the imbalance brought about by the southern migration of northern culture that we have so much hunger in the tropics.

Hunger is, of course, related to food. And food is related to agriculture or, at least, to a natural ecosystem that is to some degree the way it was at the time of creation. Agriculture changes all that. It unsettles some of the delicate relationships between species of plants and animals, making more space for some, extirpating others. So raising food with domesticated plants and animals is never free of trouble for the dark earth. It all depends on what you do to bring that food to your table. The so-called "primitive" people either didn't cultivate the land at all, feeding themselves from the abundance of the virgin forests, lakes and rivers, or, if they did some farming, their methods of raising food rarely left a permanent scar on the boundless earth which they considered to be their mother.

But with the coming of the white Europeans to the valleys and jungles of these "primitive" people in the southern half of the world and in North America in the 15th century, the coexistence between man and nature came to an end. First of all, the aborigines themselves went through a veritable cataclysm at the hands of white Christian missionaries, slavers, soldiers with advanced technologies of death, and ruthless administrators and merchants. Then the white people, who settled among the Indians of the

Americas and colonized Africa and Asia, brought with them their plants and animals and agriculture. And in the span of less than five centuries they imposed on the tropics and temperate North America a culture that was entirely antithetical to the life of that part of the world.

Farley Mowat, a Canadian student of the natural history of North America, wrote in his 1984 book, *Sea of Slaughter*: "The living world is dying in our time...When our forebears commenced their exploitation of this continent they believed the animate resources of the New World were infinite and inexhaustible. The vulnerability of that living fabric — the intricacy and fragility of its all-too-finite parts — was beyond their comprehension. It can at least be said in their defense that they were mostly ignorant of the inevitable consequences of their dreadful depredations.

"We who are alive today can claim no such exculpation for our biocidal actions and their dire consequences. Modern man has increasing opportunity to be aware of the complexity and interrelationship of the living world. If ignorance is to serve now as excuse then it can only be willful, murderous ignorance."

Mowat studied in particular the impact white people had on the wildlife of the Northeastern Atlantic seaboard, a region covering the coasts, islands and adjacent hinterlands and seas from Cape Cod in Massachusetts in the US to mid-Labrador and the Gulf of St. Lawrence in Canada. It took him five years to describe what he called "a bloody piece of our past." All this destruction, Mowat said, is still going on because vested interests continue "savaging the living world for policy, profit, or pleasure."

Another scholar, the French anthropologist Claude Levi-Strauss, spent several years in the 1930s in the tropics where he saw one of the many masks of white culture. "A proliferating and overexcited civilization," Levi-Strauss wrote in his 1955 book, *Tristes Tropiques*, "has broken the silence of the seas once and for all. The perfumes of the tropics and the pristine freshness of human beings have been corrupted by a busyness with dubious implications, which mortifies our desires and dooms us to acquire only contaminated memories."

Asked the anthropologist: "Now that the Polynesian islands have been smothered in concrete and turned into aircraft carriers solidly anchored in the southern seas, when the whole of Asia is beginning to look like a dingy suburb, when shanty-towns are spreading across Africa, when civil and military aircraft blight the primeval innocence of the American or Melanesian forests even before destroying their virginity, what else can the so called escapism of traveling do than confront us with the more unfortunate aspects of our history?"

And continued: "The first thing we see as we travel round the world is our own filth, thrown into the face of mankind. So I can understand the mad passion for travel books and their deceptiveness. They create the illusion of something which no longer exists but still should exist, if we were to have any hope of avoiding the overwhelming conclusion that the history of the past twenty thousand years is irrevocable. There is nothing to be done about it now...Mankind has opted for monoculture; it is in the process of creating a mass civilization, as beetroot is grown in the mass. Henceforth, man's daily bill of fare will consist only of this one item."

Levi-Strauss also observed the spread of the monoculture right in the middle of the Brazilian forests, in magnificent Amazonia. "Around me," he said, "erosion had eaten away the constantly evolving landscape, but man is chiefly responsible for its chaotic aspect. First, the ground was cleared for cultivation, but after a few years, the land became exhausted and was washed away by the rains from around the coffee-shrubs. The plantations were then moved further afield, where the ground was still virgin and fertile. That careful and reciprocal relationship between man and the earth which, in the Old World, established the age-old bond whereby one fashioned the other, has never existed here, where the ground has been violated and destroyed. A rapacious form of agriculture appropriated what was readily available and then moved on, after wresting some profit from the soil."

Many other scholars have confirmed, in different style and times, what Levi-Strauss said in the 1950s. The world is changing,

perhaps irrevocably. And the tropics are becoming synthetic and artificial to accommodate the taste and policies and profit and pleasures of the few powerful corporations and states running the northern half of the earth.

Thus, Mowat's complaint that the white "civilized" people are savaging the living world is true, and not only in the northeast part of North America. The barbarism is global and not confined to the killing of seals, seabirds, whales, porpoises, foxes, otters, salmon, wolves. The slaughter includes the "primitive" people of Latin America, Asia and Africa. And the greatest weapon in the savaging of millions of human beings is hunger. Hence, the enormous importance of agriculture.

Few white people for instance will accept that they are responsible for the hunger of Africa. That's understandable. The vast number of white people have nothing to do with agriculture or African peasants who are doing most of the dying. In fact they know next to nothing about hunger in Africa, except perhaps some vague memories of starving African children on their televisions. They themselves, most Europeans and North Americans, have enormous difficulties in going through life. They know little of their colonial history and, for all practical purposes, have abandoned their own fortunes to the whims of their oligarchies, a tiny fraternity of men of inherited wealth and technical education that rules the entire world. It is this abandonment of politics, this desperate effort to hide from the cruel choice of fighting for their freedom or keeping their day-to-day jobs, that has created the greatest tragedy the world has ever seen.

In Africa there is massive concentration of power at the hands of people who wish to know nothing about ecology, hunger or the history of the African people. They control most of the money of the world. Thus they dictate the directions that science must take. And since they still want more of the cash crops and raw materials of Africa, they fund research to prove that, if Africa is to modernize its economy, it has to develop its resources according to the most sophisticated industrial and agronomic practices. Then they convince the African leaders to do exactly that.

To show how sincere they are, from 1967 to 1974, the Europeans and North Americans built four international agricultural research institutes in Africa dealing with problems of animal husbandry and the "improvement" of global and tropical food plants like rice, corn, sweet potato, yams, cassava, cowpeas, lima beans and soybeans. In 1984 these institutes cost the industrialized nations a hefty $46.5 million. In this way, the mighty owners of high tech strangle African culture to death in a cocoon of gold, science and empty promises of bountiful harvests.

European and North American financial organizations like the World Bank, but not the African peasant, decide what is going to grow in Africa during the rainy season. Meanwhile, African governments borrow heavily for huge state farms and plantations. When these industrial schemes fail, it is the peasant who pays up for the disasters. He is forced to sell cheap and buy dear. And whether he sells his food or cash crops at the local market or to the state, the peasant gets no more than 25 per cent of the final price.

But the exploitation of the peasant does not stop there. The state or the church force him to work for nothing in the building of roads, schools, wells; then he has to grow crops for export; and, finally, he has to come up with cash contributions to the party or the church.

All in all, the position of the peasant has not changed much since the European colonial administrators left Africa. In fact in several sub-Saharan countries, the peasants were doing worse in the 1980s than in the 1960s. Many can't afford sugar anymore and others can't even buy soap. Ruinous prices, taxes and the bulldozers drive the peasant off the land he loves so much or they keep him permanently impoverished and hungry.

But in addition to the violence against the peasants, there's something else in the failures of high tech in the African bush. The entire culture of white science appears naked and poor despite the external wealth of fancy laboratories and experts with advanced degrees and minute specializations. All the elaborate, industrialized paraphernalia stumbles like a blind giant in a swamp. Huge tractors and toxic sprays crush and poison the tropical land. And

both agribusiness projects and state farms sink into the deserts they create in the fragile African environment.

It is this savaging of the living world of Africa — both ecological and human — that is responsible for the hunger in that continent. And since the motor for that radical transformation is none other than the scientific culture of industrial societies, we must conclude that something else, in addition to inappropriate science, is working in that incredible suffering, an operation that looks on the surface like a dedicated philanthropic enterprise combining both elegant knowledge and care for human beings. That other "something" is old-fashioned imperialism dressed in the benign clothes and soft rhetoric of "development", making Africa a mirror image of industrial societies, spreading white monoculture in the black continent. But, of course, this has a long history.

From the 16th to the mid-20th centuries, Africa was at the mercy of the white people of Europe. That long period of captivity wrote the darkest page in the history of Europe and Africa. Europe, because the European slavers and colonial administrators of Africa were unmatched in their ferocity and barbarism, and Africa, because the blacks were nearly annihilated in that experience.

You would think that with the memory of so recent a holocaust, Africans would at least be cautious in their relationship with their former ruthless masters. Not that black people ought to hate white people, but they ought to organize their societies on the models of their own history and culture; institutions that worked for thousands upon thousands of years before the coming of the white man would most certainly have something useful for the free Africans of our day. But, unfortunately, those who have tried to "develop" Africa have only one burning desire — forget the past and industrialize, mechanize the land and people exactly like the Europeans who for about five centuries ripped the earth, culture and human beings of Africa to pieces.

With such bloody origins, it would have been astonishing if white modernization made the lives of most Africans better and more enjoyable.

Development projects like the huge flour mill of Zaire, built by the Continental Grain Company of the US, or the eighteen enormous state farms of Zambia, planned and developed by Western technicians and technocrats of Eastern Europe, and China, or the Western scheme of making the immense Sahel into the world's largest mechanized farm, simply buy time for the colonized oligarchy. They are monkey wrenches thrown into Africa's social volcano. Also, it would be asking the white people too much to expect them to bring to the black societies of Africa ideas and technologies that they themselves no longer use.

The Europeans and North Americans, spending billions reproducing their culture in Africa, have for all purposes no more peasants. But the Africans are still overwhelmingly peasants. Now that's the dynamite that explodes and piles up debt each time an African government and a white organization go on mechanizing agriculture with the vain hope of raising food to feed the restless city folk. This happens because giant industrial and chemical agricultural schemes in the countryside can only take place over the anger and land of peasants. And, besides, most of Africa is simply not the place for big machines, poisons, one crop. Nearly the entire continent is one of the most ecologically fragile and sensitive spots on earth.

The peasant and Africa go together. Not only does the peasant love his land but his methods of raising food are in harmony with all other life around him. Therefore, disturb and hurt the peasant and you unsettle the ecology of the land. Africa without the peasant is a huge wasteland, a continent without a soul.

Telling the *WaBenzi*, the Mercedes Benz rulers of Africa, that the lowly peasant is right, is going to be unsettling, perhaps even dangerous, precisely because they have put so much at stake in becoming like their former masters, getting into the clothes and skin of white people, be they of the capitalist or communist persuasion.

But this will not help at all. White people agree on at least one thing. They moved away from their own peasant history with so much violence and at the expense of so many black, mulatto,

yellow and red people that they are determined to see the peasant disappear from the face of the earth.

It does not make any difference if the white technocrat is a graduate of Moscow State University or Michigan State University. He thinks the peasant is "backward" and ought to make room for tractors and toxic sprays.

For this reason alone, the peasant must be brought back into the politics of Africa or Africa will explode like an ecological time bomb. In practical terms, this means that leaders like Julius Nyerere, President of Tanzania from 1961 to 1985 and chief of that country's Revolutionary Party, ought to get the peasants into politics. And whether a decision has to be made about agricultural research, irrigation, cash crops or anything else concerning the life of rural people, peasants ought to have the right to say yes and to say no. Again, when the matter is that of the culture of the land, there's no better judge than the peasant. The most advanced ecological thinking today is what peasants have been saying for thousands of years.[38]

You can't treat the earth like it's dirt. And you can't raise food for long if you mine the land. The land, and everything above and below the thin skin of the earth, are alive. That means in farming you get involved with biology and complex biological systems. And the biology of the tropical forest in Zaire is different from the biology of a piece of farm land in Illinois, Maryland, Nebraska or California. Thus taking agricultural technologies that cause ecological damage at the place of their birth, Iowa and Kansas or the Ukraine and Russia, and moving them to East Africa is both reckless and irresponsible. But if you care about science, then all that transfer of "advanced agricultural technologies to the tropics has much more in common with witchcraft than with science if by `science' we mean searching for the truth, doing things that are in harmony with the ecologies of the land, advancing the welfare of human beings."[39]

In Africa nobody wants to even think about these questions because there are too many hungry people around. Some food from North America and Europe goes to starving Africans roam-

ing the abandoned land of their fathers like the resurrected dead of their myths. But what about tomorrow? The *WaBenzi* who rule Africa are white people with black skin. They no longer dress like Africans. They no longer speak the languages of Africa. They protect lions, tigers and elephants from the arrows of Bushmen, even when those people are hungry and starving, so that tourists with money can shoot these animals with the swift explosion of their guns from the safety of their cars.

But more than that, the *WaBenzi* don't seem to like their wildlife anymore. They would rather not have any. And they would rather have parking lots and huge farms in their animal reserves.[40] They have absorbed European colonial teaching that said domesticated animals are better than wild animals — a bad theory if only because wild animals have had millions of years of living without destructive competition in the fierce sun, rain, rich and coarse vegetation, waterholes and trees of Africa. But you can't put wild animals and people in zoos and expect the animals to stay wild and the people human. However, that's what development experts are doing to Africa. They are putting enclosures everywhere. They are preparing an ancient culture to self-destruct.

Jomo Kenyatta, a Gikuyu African tribesman who studied anthropology in England and became Kenya's first president, saw all that. "In a low and sad voice," Kenyatta wrote in his 1930's book, *Facing Mt. Kenya*, "(Moga wa kebiro) said that strangers would come to Gikuyuland from out of the big water, the color of their body would resemble that of a small light-colored frog (kiengere) which lives in water, their dress would resemble the wings of butterflies; that these strangers would carry magical sticks which would produce fire...The strangers, he said, would later bring an iron snake with as many legs as monyongoro (centipede), that this iron snake would spit fires and would stretch from the big water in the east to another big water in the west of the Gikuyu country.

"Further, he said that a big famine would come and this would be the sign to show the strangers with the iron snake were near at hand...That the nations would mingle with a merciless attitude towards each other, and the result would seem as though

they were eating one another...Many moons afterwards...the strangers dressed in clothes resembling the wings of butterflies started to arrive in small groups; this was expected, for prior to their arrival disease had broken out and destroyed a great number of Gikuyu cattle as well as those of neighboring tribes, the Masai and Wakamba. The incident was followed by a great famine, which also devastated thousands of the tribesmen."

But famines keep devastating thousands of tribesmen throughout Africa. In fact I often think the people of that vast continent will not make it. Not that all Africans will die of hunger. Rather the death I see will be that of culture. Africans are becoming strangers from out of the big water. They now have sticks producing fire. They dress in clothes resembling the wings of butterflies. And they think like those human beings that look like small light-colored frogs living in the water.

Is it any wonder that the peasants of Ghana, for example, use Lindane, a terribly toxic agricultural carcinogen, for fishing? And these peasants used to be proud human beings who lived in balance with nature. But what happened to these people of the land is rather symbolic of the destruction of Africa. Laurens van der Post, a South African writer, suggested in his 1961 book, *The Heart of the Hunter*, that bringing a Bushman face to face with a white man would be enough to crush him.

"I have lived with primitive people so much," he said, "that I have an inkling now of the almost paralytic effect our mere presence can have on their natural spirit. It is as if, when they first encounter us, the independence of our minds from instinct and our immense power in the physical world, which to them is not composed of inanimate matter but is another manifestation of master spirits, trap them into the belief that we are gods of a sort. Either they feel it impossible to be themselves in our presence, or they find it so exhausting to maintain even a part of their selves that they are compelled to rid themselves of us by cunning, force or running away. The longer contact is maintained, the more subtly does this process work in their spirit, and the more devastating its effects. If only we were humble enough to realize that just by what

we are we play the devil with the natural spirit of man, we could mitigate some of the consequences."

"Primitive" peasants also feel profoundly humiliated seeing those white scientists, and, increasingly, members of their own ruling class, with huge machines, liquid poisons, planting large pieces of land with only one kind of seed, thinking them to be devils unsettling the natural world so sacred to them. Science cannot merely be passed from place to place just because some people make money out of that passage. I am certain that there are as many "sciences" as there are distinct cultural groups in the human family — for example: the "primitive" Indians of the Amazon have their own science. Yet science must, first of all, meet human needs — it grows in some place because that place has nutrients for its growth, people just never cease wondering and asking questions.

What the peasant does is full of the most sophisticated of ecological principles. However, how many "scientists" with degrees in agriculture, biology and ecology from the world's industrial societies have shown any respect for the wisdom of primitive people and peasants? Or have had the courage even to suggest that peasant farming, rather than industrial agriculture, may well be a better source of knowledge for raising food?

Raising these questions is certainly important, not necessarily because we are likely to discover an ideal peasant who has a magic solution to the ecologically-destructive farming practices of the world's industrial societies, but because that way we do have a chance to gain an understanding of why, for instance, it is the peasant who dies during times of famine while it is the same peasant who also raises most of the world's food.

Seeing agriculture from the eyes of the peasant, I think, has the virtue of getting us closer to the truth. Options appear which did not exist before; and the "green revolution" and "development" do become intelligible for what they really are. They tell me they are responsible for the hunger and revolutions now convulsing more than half the people of the earth. They tell me that industrial farming is causing significant social dislocation in the very societies which gave it birth; and, most importantly, indus-

trial agriculture is one of those things which is threatening the entire world with ever graver ecological crises and upheavals. In fact, the fate of the peasant is intimately bound to the ecological fate of the earth. Nothing that hurts the peasant can leave the world in the same delicate balance. In the same way, when the peasant starves, the people of the cities go to bed in fear. They know the food they eat is probably his.

"The people perish," Leo Tolstoy said in his great 1899 novel, *Resurrection*, "they are accustomed to the process of perishing, customs and attitudes to life have appeared which accord with the process — the way children are allowed to die and women made to overwork, and the widespread under-nourishment, especially of the aged. And this state of affairs has come about so gradually that the peasants themselves do not see the full horror of it, and do not raise their voices in complaint. For this reason we, too, regard the situation as natural and proper.

"Now it was as clear as daylight...that — just as the peasants always recognized and pointed out — it was the landlords who were mainly responsible for their poverty, the landlords who deprived them of the land which was their only means of support. And was it not perfectly plain that the children and old people died because they had no milk and there was no milk because there was no land on which to pasture the cows and harvest grain and hay. It was perfectly obvious that all the misery of the people, or at least the chief and most immediate cause of the people's suffering, sprang from the fact that the land which should feed them did not belong to them but was in the hands of men who take advantage of their ownership to live by the labors of the people. And the land, which was so vital to them — they starve for want of enough land to support — is toiled over by these same peasants on the verge of starvation, to the end that the grain might be sold abroad and the owners of the land might buy themselves hats, canes, carriages, *objects d'art* and so on."

Close to a century later things have only gotten worse. Now whole armies of international civil servants — who have little but contempt for rural people — are busy counting peasants, warning

them to stop having kids, even telling them how to practice "clean, scientific agriculture." The peasants themselves get very upset because they know if they follow the advice of those strange people speaking foreign tongues, it would mean they would have to abandon their culture. But they also know that with the scientists next door their days may be numbered since nothing would be the same again, certainly not the price of food, not food itself, and, least of all, farming, that is, their way of life.

CHAPTER NINE

Food and Farming in North America

I certainly would like to see all those foreign scientists go home. And in the United States, we need to put to use the peasant's agrarian wisdom by reinhabiting the countryside with small farmers practicing ecological farming; giving them a good price for the food they grow so that they have a reasonable livelihood and we eat nutritious food and drink clean water.

But make the ecological integrity of the environment the very foundation of that price. This would guarantee not merely good quality food but gentle agriculture. And implement this social policy without considerations of farm size or debt. As long as the farmer raises food in balance with nature, reward his efforts handsomely.

That this is not the case today says something about the politics of food prices. You see, approximately 100,000 farmers grow most of the food for 230,000,000 Americans. These are large farmers, no doubt about that. Yet they and the small farmers are a tiny minority. So much, in fact, that at least 50 percent of those elected to the U.S. Congress have no farmers in their districts. Thus the price of food grown by farmers is settled by non-farmers. Urban politicians fight to keep the price of a loaf of bread low enough because they don't want to be responsible for spreading hunger and social unrest in their own backyards and because they want to

hook the entire Third World on the taste of American wheat and corn.

The same city politicians are also cynical about farmers. They watched them prosper in the 1970's but heard not a word of protest when the giant grain companies were misweighing the grain they were selling to their clients in Asia, Africa and Latin America. Multinational grain companies even bribed the government's own grain inspectors to do their bidding.

Meanwhile the price of food in the United States more than doubled during the years of farm affluence and grain scandal between 1970 and 1980. But once the price of wheat began to fall in 1977, the farmers drove their huge expensive tractors to Washington demanding that Congress create a permanent prosperity in the countryside with high food prices, easy loans, a moratorium on farm foreclosures and grain reserves. The government did some of those things without notable success. But, above all, the government replaced the marketplace as the arbiter of food policy.

Not that today's food prices can resolve the crisis of agriculture because, in my opinion, that crisis is more than financial despite the financial disaster it brings on so many family farmers. American agriculture suffers from a cultural crisis. And the very fact that food prices were one of the big political issues in the United States in this century suggests not merely that money is important in farming but that the debate about agriculture did not always focus on its essential nature: something which is a way of life for some people and a lucrative business for others.

In my view, agriculture is life — the science and food and philosophy of the earth, the gift of the gods to man so that he could prosper with the seasons. To cultivate the land, to farm, was man's first and most profound step in the creation of civilization. Agriculture brought people together to turn the soil, to see the seeds sprout, to harvest the fruit of their labor, to create a community of social and political justice, cooperation and equality and brotherhood.

All this gave birth to the sciences, for to raise his bread man had to read the beautiful pages of nature, he had to respect the

harmony of life — a symbiosis of myriads of other species: plants, animals, the infinite social communities of fish, birds, wildlife above and below and next to him. He could not help but remember. He could not help but wonder. And his progress against hunger and famine was great. And his opening a window to the heavens, and his spiritual and material creations were good enough for a million years.

Both the peasants of the third world and the farmers of America still hold some of the seeds of this cultural inheritance. But they have changed that culture as much as they themselves have changed as human beings. The American farmer cannot become a peasant and the peasant cannot become a grower. Yet they can learn from each other and from the land. The farmer of this country must see the wisdom and security and profit of getting small once again, and having many other small farmers as neighbors. There is nothing mystical or magical about the "small" except that in farming the size of farms determines the technologies, labor, crops and social relationships in the countryside. In other words, small farms and large agribusinesses both certainly raise food, but beyond that they are different cultural and political organizations. The first is a living ecological and human community, the second is a massive factory in the field.

The Romans under Tiberius Gracchus said that no farmer should hold more than 310 acres of land. I am certain that Tiberius Gracchus' law would be good enough for our times as well. I also know that giant farms and giant machines will either be brought down to human scale and values or they will face the fate of the dinosaurs. The government can offer guidance and support the transformation. Rather than paying billions of dollars to large farmers to set aside swamps and sand dunes, the government ought to subsidize those farmers ready to move to sustainable or gentle agriculture. And I think the government will do all those things if the farmers and the rest of us say that's what we want to do with agriculture.

Also, it is simply too dangerous for more than 230 million people to rely for most of their food on about 100,000 "growers".

Not only should we not allow the next family farmer, who promises to practice gentle agriculture, go out of business, we should increase his numbers to several millions strong. "If our institutions are to be preserved," said George W. Julian in the *Atlantic Monthly Magazine* of March 1978, "we must insist upon the policy of small farms, thrifty tillage, compact settlements, free schools, and equality of political rights, instead of large estates, slovenly agriculture, widely-scattered settlements, popular ignorance, and a pampered aristocracy lording it over the people...the unrestricted monopoly of the soil is as repugnant to republican government as slavery is to liberty..."

Once again, we must put land into the hands of small owners. Not much to lose, I would think, and a whole world to gain: Gentle or sustainable or regenerative or organic agriculture would not throw America into backwardness. In fact, the Amish and organic farmers are not doing that badly and they may well be the only family farmers in the United States who at least come close to the spirit if not the real practices of peasants, growing food without most of the hard and toxic technologies of conventional farmers.

Besides, the beauty of practicing soft husbandry in the immense and generally fertile plains of America is that it is most certainly going to start an ecological renaissance. Because, for the first time in the history of this country, theory and practice in biology will be tested right in the farmers' fields for the benefit of all.

We live in an age where "science" is supreme. Say "science", and you mean almost all that goes into the making and supporting of this giant industrial civilization with its computers, automobiles, television, flying nuclear bombs, high-yielding hybrid corn, glittering food supermarkets, monstrous tractors and lethal dioxins. Science and its applied sister, technology, seem to be just about everything — systematic knowledge, practical skills for solving problems, creating tools, power. Yes, science is above all power. And science is as old as we care to remember. People have been in the business and art of science, always creating something out of curiosity, observation, experimentation, thinking and reflection.

This includes the peasants who have had their own gentle ways of raising food and creating distinct cultures. If these agrarian people differ from us, it is in their attachment to the land. They are the Indians of Africa, Latin America and Asia. They see their own educated technicians and landlords closing in on them, forcing them into reservations. And in place of their small pieces of land raising a variety of nutritive foods, they see enormous machines sowing the earth with one crop that brings cash to the owners of the machines but hunger to the dispossessed. If we can't stop that disastrous policy yet we should at least draw inspiration from what the peasants do.

CHAPTER TEN

Fear in the Countryside

I say all these things because I love the peasant. My father was a peasant. And I grew up in a small village in Greece where nearly everyone was earning a living from the land.

Because of where I grew up, because of what I did after I left my village, I had a sense of the rebellion and fear of the peasant. I could see the terror in the eyes of his oppressors. That is why I called the gathering storm — the rising volcano of the peasant — *Fear in the Countryside* (1976).

In that book, I said that white agriculture was just too big for the small economy of the peasant, a man who was neither white, nor rich, nor willing to blast his culture to pieces so he could eat tasteless corn and rice. I said it wasn't right for a thousand "development" institutions to support murderous schemes for the abolition of the peasants, the silent assassination of several hundred million rural people working hard to raise food and to preserve their strong democratic traditions. My message scared some people enough that they tried to have my book suppressed.

But for the most part few care about what others or I have said on the need to tell the merchants and the scientists and the development bankers of large-scale farming to get off the back of the peasant. This sets fires burning in my soul. I damn those polite

missionaries, quiet gangsters who have made the murder of the peasant so legitimate, their lives so trifling, that an icy wind, a bloody monsoon can sweep and cover the land with a trail of tears and fear, soaking the earth with indifference.

"If there were a man who dared to say all that he thought of this," Henry Miller said in his 1934 book, *Tropic of Cancer*, "there would not be left him a square foot of ground to stand on. When a man appears the world bears down on him and breaks his back. There are always too many rotten pillars left standing, too much festering humanity for man to bloom. The superstructure is a lie and the foundation is a huge quaking fear. If at intervals of centuries there does appear a man with a desperate, hungry look in his eyes, a man who would turn the world upside down in order to create a new race, the love that he brings to the world is turned to bile and he becomes a scourge. If now and then we encounter pages that explode, pages that wound and sear, that wring groans and tears and curses, know that they come from a man with his back up, a man whose only defenses left are his words and his words are always stronger than the lying, crushing weight of the world, stronger than all the racks and wheels which the cowardly invent to crush out the miracle of personality.

"If any man ever dared to translate all that is in his heart, to put down what is really his experience, what is truly his truth, I think then the world would go to smash, that it would be blown to smithereens and no god, no accident, no will could ever again assemble the pieces, the atoms, the indestructible elements that have gone to make up the world. In the four hundred years since the last devouring soul appeared, the last man to know the meaning of ecstasy, there has been a constant and steady decline of man in art, in thought, in action. The world is pooped out: there isn't a dry fart left. Who that has a desperate, hungry eye can have the slightest regard for these existent governments, laws, codes, principles, ideals, ideas, totems, and taboos?"

I wish I could say I were that man. It is not because I do not have a desperate, hungry eye but rather because at a more innocent age I found myself lured into a labyrinth with only a thread left to

bring me light and love. I opened my heart and said a little bit of what I thought of this world in *Fear in the Countryside*. I continue to say even more of what I think of this world in everything I do and the ground is ready to swallow me alive, thinking, hungry. The few people who want to be nice to me say I should compromise, play the filthy game of prostitution. They say I should not be as bitter as I am, and maybe they are right because I am bitter, full to the brim, terribly angry because, really, there is hardly a square foot of ground to stand on.

My only defense is my word, and slowly, I will open my heart some more to the world. For beneath my profound mistrust of the technological barbarians hibernating deep in the dark, in caves of cement and loose atoms, even spraying their flowers with poisons, there is profound love for life, people, nature. That immense tension fills my dreams; the extremes of love, passion, anger, exhilarating hopes and crushing moods, thirst for truth, simplicity, kindness become my daily bread, the air I breathe. They are what brings me to the peasant, a human being who is my brother, under my skin, so that his crucifixion stabs my heart, his wounds threaten me personally.

Eons taught the human eye to relax and enjoy the infinite variety of plants, animals and wildlife, a beautiful condition of truth, love and nature that has become foreign to the millions of human beings behind city walls. Only the peasant is still fully man, sane, healthy and only because his umbilical cord is still with the earth. And to see all those missionaries of white science swarming to the four corners of the world intimidating the peasant, peddling their murderous weapons to the bosses of plantations, is to see deserts spreading, children without animals, the extermination of history.

In this madness, the chance that one of us will make a dent in the mechanism of long-distance repression by helping cut off the funds for the science missionaries is not encouraging. Like any other project of mechanical civilization, this crusade to "modernize" the peasant is big worldwide business, enjoying the support of all industrial and developing countries, including the

agencies of the United Nations and other international organizations. And the matter, as I said, is strictly political and philosophical. Political because the people of the cities are afraid of the peasants and philosophical because the people of the cities (who have the power) harbor hatred for the values of the peasant. Hence the universal praise for "progress", meaning constant change, particularly the invention and use of new machines. Simply to leave alone peasants with their old customs, small farms, eternal culture is tantamount to hindering that prized progress. The white-educated oligarchs of Asia, Africa and Latin America would love to get rid of their peasants. This is why the mechanisms for peasant repression are so pervasive and global. In cultures born in the explosive atmosphere of mass-production technologies, the peasant does not have a chance or place.

For these reasons, my effort in 1977-1978 to introduce the question of the peasant in US foreign policy was doomed from the start. I worked then for a politician, a Congressman who was a critic of aid and, particularly, of the World Bank, America's Vatican of international development. The Congressman was Clarence Dickinson Long, a Democrat who for some 22 years represented the wealthy community of Baltimore country, Maryland.

Long went to Congress after teaching labor economics at Johns Hopkins University for nearly 20 years when this country was gripped with all the terrors of unionism and cold warfare against Russia. So, Long, eloquent like a southern preacher about the morality of hard work, did get to the U.S. House of Representatives for the first time in 1962. And his vigorous defense of Israel and the big steel magnates of his district successfully won re-election for him until 1984.

With membership of the pork-barrel appropriations subcommittee on foreign aid, Long became a feared broker in power and gold. He found it interesting to travel to the poor client states of America, especially those south of the border. His trips sent waves of anxiety throughout the hierarchies of foreign aid functionaries at the State Department, the World Bank and other outposts of civilization in Washington. This is because Long was honest in his

contempt for what they did. He used to blast the fat projects of the World Bank and those of the Agency for International Development (AID), the U.S. dispenser of modernization and development among the non-white heathens coming to America's shore for alms.

Actually, Long was a missionary for his own kind of religion. He called it light capital technology and by this he meant the use of small amounts of money to help poor people to become self-reliant all in the spirit that small is somehow, if not beautiful, at least cheap and practical.

But behind all this wonderful rhetoric on behalf of the world's poor people and in the midst of blows against wasteful economic development projects, there lurked an unfriendly demon in the Maryland baron of foreign aid. He did not like the president of the World Bank, Robert McNamara, because McNamara paid little attention to Long during his defense of the Vietnam War. Now that McNamara was in charge in the 1970's of this planet's most ambitious project ever, that is to end world poverty once and for all by wiping out the peasants, Long had a field day. He delighted in ripping apart the facade of doctored assumptions that the agents of the World Bank presented with so much scientific aplomb to anybody who listened to them. He did this especially during the annual charade in Congress when the U.S. Treasury Department invariably sent one of its assistant secretaries to tell the American people that without aid to the World Bank they might as well kiss good bye to all their hard-won security throughout the non-American world.

In these yearly Congressional aid festivals, there was a real chance that the President might even call Long (as Carter did in the winter of 1977-78) on the phone and plead with the old man that it was in the national interest to go ahead and give the World Bank and AID a few more billions. But the real dark mood of Long came through not with the details of fraud and corruption of foreign assistance but with his unwillingness to champion the real cause of the peasant in the midst of cosmetic pronouncements on human rights and small projects.

I told him that. After all, I thought he had hired me because he appreciated my book, *Fear in the Countryside*. I said that without substantial land reform in Latin America, without giving the land back to the peasant, all foreign aid merely strengthened those military and other killers running mad in our friendly tyrannical dependencies south of California and Texas. This to Long was revolutionary talk because he knew that the landowners of Chile or El Salvador, no more than the landowners in Maryland or Iowa, would not give even a portion of their land away, even if they had stolen that land from the campesinos or the small family farmers. Congressman Long also knew that the United States needed land reform as badly as Guatemala, Bolivia, Peru, Mexico, Colombia, Chile, El Salvador, Honduras, Nicaragua, Ecuador, Argentina, Costa Rica, Panama, Paraguay, Uruguay and Brazil. So, in addition to my crime of having convinced him to give $15 million to Cyprus in the aftermath of the barbaric Turkish invasion (he jokingly told me he never had imagined he would have "a Greek agent" working for him), there was I suggesting that, suddenly, and 200 years too late, this country ought to stand for social justice for the peasant and even come up with a scheme to create an institution to launch the United States behind serious land reform. Needless to say neither I nor my ideas lasted too many months near the foreign aid satrapy of Clarence D. Long.

Yet I remain grateful to Long for his occasional outbursts against America's secret, corrupt practice of buying the soul of other cultures. The managers of the World Bank and AID knew about me and they did not like the fact that I had the ear of their worst nemesis. McNamara had ordered his underlings never to deal with me directly and with good reason. Some of those people did feel guilty about screwing the peasant. They wanted to get all that psychological burden off their chest and I was willing, in fact, I was encouraging them to speak up.

So, slowly, amidst the chaotic legislative activities of my boss, I was putting together some of the evidence for lengthy hearings on the violence of foreign aid. Dana G. Dalrymple, a protagonist in the U.S. government bureaucracy on behalf of "the green revo-

lution", was so upset by what he suspected I was trying to do that once, on the phone, he told me I was his worst enemy. Hints of my plans sent shivers through the spine of the Inter-American Foundation, a small government financed aid organization that was designed to revive the principles of Kennedy's Alliance for Progress, but ended by becoming an invisible imperial missionary of Christian capitalism. Working silently, buying dissidents, funding the chains to link peasant cooperatives, agrarian savings and loan associations, it spent a few million to purchase an illusionary moment of social stability in a continent bubbling with social explosions.

I knew that this little theological outfit peddling bucks, research and handicrafts among America's most oppressed people was hardly up to anything good. Like a miniature AID or a baby World Bank, the pet project of Congressman Dante Fascell from Florida was dispensing the wrong kind of medicine at the wrong place for the wrong people. Two of my good friends who honestly disagreed with the golden chains of social oppression were summarily dismissed by the soft-spoken William Dyal, the former president of the foundation, an experienced Peace Corps volunteer in Colombia, a Christian minister, a gentleman who is affable, all smiles, disarming. The crime of one of these two honest civil servants was that, in the early 1980s, he was against aid projects in Nicaragua in the absence of an invitation from the Sandinista government.

At any rate, nothing came of my hopes to expose the violence of foreign aid during Congressional hearings. Congressman Long vacillated, procrastinated, said no to my proposals concerning who should testify, who should do the research. And, of course, he would have nothing to do with my suggestion that I head a small team of investigators into the doings of our overseas aid dependencies. But, in the end, working for Long did help me to understand this much at least: when the World Bank, AID, the Inter-American Foundation and other white foreign aid organizations loan money or ideas to black, mulatto, red and yellow people at any place throughout the earth, they help the landed and other ruling classes

of the borrowing society to suffocate the peasant, the Indian, the "primitive" with hunger.

The magic and superstition that cover up this simple truth go back to yesterday's profitable trade in slaves and goods and reflect the legacy of exploitation with which this century has saddled the white man's former slaves who are now comfortably known as partners in progress, development, industrialization and so on. I am not saying that white people have managed to create societies of social justice and, therefore, they turn to the non-white barbarians for cheap labor. No. There's more to it than that.

The Polish writer Tadeusz Konwicki came fairly close to the ugly truth of our technological age when he observed (in *The New York Times* of December 18, 1981): "Today slavery has become invisible. On the surface some poor nation behaves naturally, listens with reverence to its own anthem, elects a parliament, dispatches emissaries, sits on the Security Council; in a word acts like an independent, sovereign state. And not one sees the revolver at its back, a cocked revolver belonging to its neighbor or to some other country. A nation of this sort utters businesslike, thoughtful, even profound speeches with a poker face and no one could guess that, with all its strength, from the marrow out, it wants to roar like a beast whose throat is being cut, screech like a rabbit being skinned, howl to God for help against inevitable doom. Previously, a slave was entitled to cry out; today the slave has been assured the right of silence, muteness. Crying out brought relief, as it does for a newborn baby. Silence and muteness cause degeneration, they suffocate, kill. Previously, when a captive nation regained its freedom, it was not hindered in joining the great family of free nations. Today, if by chance it is set free, it will no longer be fit for life and will perish from the poisons accumulated during the dark night of captivity."

It seems to me Konwicki is right, except I can't think of a time, in this century at least, when there was such a thing as a "great family of free nations." Konwicki's lament is the lament of Poland and he can be excused for having dreamt of freedom across his borders, beyond the seas. But his terrifying indictment of the

consequences of captivity fits nicely around the neck of those societies begging for bread, murdering their peasants so that they create mills to produce unnecessary material goods, even food, for the obese citizens of North America and Europe.

The murder of peasants, depopulating the countryside, has many of its roots in the racist ideology of "population control" that the 19th-century English preacher, Thomas Malthus, introduced into the science and culture of Europe. Not that Malthus came up with anything original in his saying that rich people have more rights to survive than poor people. England as a country was already practicing such a genocidal policy. The peasants in England were murdered for centuries so that by the time of Malthus most of the English countryside was divided up into the huge estates of the landed oligarchy. That way Charles Darwin's biological doctrine, that in the struggle for existence only the fittest animals survive, was made a law for the ordering of society in England. The English carried their Malthusian policies everywhere they went. That means throughout the world since they had a colonial empire down to the 1950s.

Peasants never work the land to produce more than a few loaves of bread. They live too close to the margin to even entertain the idea of exploitation. Their major concern is to raise enough food to avoid hunger and secure a small income until the next harvest. And in the small world of the peasant, society has given birth to traditions and social obligations that make hunger and destitution unnecessary to individual members of the agrarian community. Peasants manage to survive always from what they find in the village. Like fish, peasants swim and swim well in their self-reliant village lake. But now the very life of that lake is threatened with extinction.

CHAPTER ELEVEN

Eloheh: Resurrecting Peasant Agriculture

Fyodor Dostoyevsky said in his novel, *The Brothers Karamazov*, that "the lower and poorer our Russian peasant is, the more noticeable is that splendid truth in him."

"Now, the *fellah*, the unemployed man," wrote the African intellectual Frantz Fanon in his book, *The Wretched of the Earth*, "the starving natives do not lay a claim to the truth; they do not say that they represent the truth, for they *are* the truth."

It is from this peasant source of knowledge and truth that all of us, missionaries of white civilization, ought to seek inspiration and understanding of our troubled world. Only the peasant can bring this global famine to an end. But for this miracle to happen in Africa, for instance, the white-educated, white-painted rulers of that continent have to humble themselves and get back to their culture, dismantle the ecologically destructive "development" schemes treating Africa like it was Europe and America. And, above all, listen to the wisdom of the peasant and help him do what he does best not in a state farm, a plantation or a spread like those of the Colorado sheep ranchers, but on his own small piece of land.

Even Julius Nyerere of Tanzania who favored agrarian socialism went to the white people of Europe and North America too many times begging for aid in order to build a huge, extremely

expensive, automated bread factory for the privileged people of the capital city, Dar es Salaam, and to finance the collectivization of agriculture, an enormously painful experience for millions of peasants. Tanzania may benefit by undoing these bad policies. And the least we could do would be to visit peasant communities throughout Africa, Asia and the Americas, sleep in peasants' homes, eat what they eat, think what they think. The struggle of the peasant may still have some of the seeds for our salvation. Not that we will abandon our machines and cities, but we may take care to help our small farmers revitalize both the countryside and the raising of bread so that health and justice get back into this most ancient profession. Only then will we be able to say that the entire world has come of age — the great disorder under heaven fading into history, the peasant and his gentle farming healing the earth.

In a personal way, I would also hope that we all think through this healing process. We do not need a new culture. I am certain of that. We need something with profound roots in agrarian life, healthy environment, healthy people, respect and love for the land. We need a civilization with none of the predatory ideas and practices of machine culture; a civilization without a parasitic plutocracy, oligarchy or any other kind of dictatorship. It would be a civilization that practices agriculture without deadly poisons, without the suffocating serfdom of either landlords or toxic technologies, without enclosures, without any private monopoly of the soil.

It would be as well a civilization which grants its rural people the right to cultivate small pieces of land, helping them to cooperate with each other, helping them to raise a variety of wholesome food, helping them to maintain the simplicity and democracy of agrarian life. That way the earth will, once again, become pregnant with the seeds of survival for animal, plant, man.

Whether or not this dream has a place in late 20th century America is a question to be answered by each one of us when, alone, we think of our legacy to the next generation. Anyway our children will damn us for all eternity if the only "asset" we pass on to them is a huge farm where everything is deathly quiet, where the giant

food factories are sealed off from the rest of society with chemical, concrete and iron machines, their past entombed in the silence of those immense enclosures of poison spray drift and cancer.

In *Fear in the Countryside*, I said that Western agricultural technologies in the tropics were dangerous because they strengthened the oppressive hand of the agribusiness class. Ten years later, in 1986, several Third World intellectuals meeting in Penang, Malaysia, confirmed my conclusion. In fact they went much further than I did in their condemnation of the adverse effects of Western know-how in the Third World.

In a document known as "The Penang Declaration on Science and Technology", they said: "The resources, techniques and practices of the Third World in the fields of agriculture, irrigation, forestry, animal husbandry and fisheries are in immediate danger of being wiped out under the impact of policies favoring modern western practices in all these areas. The new practices that are being introduced are inherently incapable of efficiently utilizing the resources available in the Third World countries and sustaining the Third World populations.

"These practices are adversely affecting the productivity of land and are destabilizing the ecological balance. They are worsening the dependence of the Third World on the industrialized countries for knowledge, techniques and inputs in areas where indigenous knowledge and resources are capable of, and were till recently, meeting the needs in a satisfactory fashion. Moreover, logging and forest degradation has also caused tremendous soil erosion in the Third World countries. Agriculture and connected practices being the major way of life of the Third World societies there is an urgent need to defend the indigenous knowledge, practices and resources in these areas from the western onslaught. We therefore recommend that the Third World countries should make joint efforts for the restoration of the indigenous way of life in these countries."[41]

Despite the anger of these Third World intellectuals, their appeal for getting back to their roots for inspiration is good for them and it is good for us. There is tremendous wisdom in

indigenous knowledge for the survival of the earth. The English agriculturalist Sir Albert Howard, author of the 1940 classic study of Indian agriculture, *An Agricultural Testament*, once observed that in his 20 years or so of research in India he learned his agriculture from the peasant, "my new professor". He wrote: "By 1919 I had learnt how to grow healthy crops, practically free from disease, without the slightest help from mycologists, entomologists, bacteriologists, agricultural chemists, statisticians, clearing-houses of information, artificial manures, spraying machines, insecticides, fungicides, germicides, and all the other expensive paraphernalia of the modern experiment station."

In a sense, Howard was saying that fertile land gives birth to disease-free crops which should then be able to nourish healthy animals and people. And his great discovery was simply to do what the Indian peasant had been doing for countless centuries with infinite patience and trust in the benevolence of the natural world, namely to maintain the fertility of his land with plenty of love and not less animal manure. Howard grabbed at that idea with a passion. He tested the peasant's gentle methods endlessly. "Large-scale results coming in a growing torrent from all over the world," he said, "show that the ephemeral method of manuring, by means of chemicals and the resulting *survival of the weakly plant bolstered up by poison sprays*, are bound to be swept into the oblivion which they merit."

Unfortunately, Howard was talking to a culture already converted to the profits of industrialized farming. And ecology during those long and dark years of global warfare was in deep freeze. Perhaps this is an auspicious moment to embrace again his thesis of wiping out disease with the peasant's agrarian wisdom and repopulating the countryside with small farmers practicing efficient farming.

There is also the rich culture of the American Indian who is still struggling for his land and freedom. "At home I have a collection of stone arrowheads," said Jimmie Durham, an American Cherokee Indian, to his European friends in 1979 in Geneva, "that have been handed down in my family for about seven

generations. Just that long ago we were in the 'Stone Age', and we have not yet passed from that age into any other age, partly because we are not free people and partly because the 'Plastic Age' does not please us....

"American Indians have been in North America for at least 70,000 years. Before Columbus, our population, excluding Mexico, was somewhere around twenty million or more. We had an extremely varied and nutritious diet all the way across the continent, with no poverty, and with cures for most of the diseases we knew. Our medicinal technology was extremely sophisticated, including chemical birth control methods and universally free aspirin (salicylic acid) for hang-overs. Technological development was in continual progress, although not with the explosiveness that comes with capitalism. (I would like to point out that very much of capitalistic technological development has been for war, or for relieving the ills brought on by technological development, or for sustaining more and more humans to the exclusion of other animals).

"The native people in North America are very different from one Indian nation to another, culturally and even racially. While there is an underlying vision that unifies them, life styles are varied according to the geographical region. For Indians culture springs from their life on specific lands, in specific ecological systems.

"I am Cherokee, so I will speak about Cherokees," Jimmie Durham continues. "But we are not very different from any of the other nations east of the Mississippi. All Indians of those regions are farmers *and* hunters, a fact so ignored that I think there is no name in anthropology for that kind of society. But a crop failure was seldom disastrous because we did not depend exclusively upon domesticated crops.

"The same was true of hunting and fishing. Early British travelers reported seeing huge herds of semidomesticated turkeys. We could have easily depended exclusively upon those animals for meat, but we never thought to do so. It would have meant domesticating those animals, which we consider as elder relatives. Needless to say, such a system is completely sound ecologically. It

places humans within the ecological system, instead of in opposition to it, or 'at the mercy of' it, as goes the stereotype about us primitives. It should be clear that it is possible for all sorts of development and change to take place within such a system. It is still eminently practical today."

The Cherokee word for land is "Eloheh". That same word also means history, culture, and religion for them. They believe they have no history and no culture if they have no land to come from. They cannot think of themselves as existing without existing directly in the land. Land for the Cherokee is not property, or even a place to build a house and plant crops. It is something truly sacred in the most profound sense, and it is part of themselves.

"There is no technology or even philosophy which allows humans to escape this earth — this Eloheh — or to have `mastery' over it. We will always have to eat, and so we will always have to depend upon our family for groceries. Maybe we can get unnaturally fat or numerous by stealing the groceries of other members of the family, or murdering them, but such a situation cannot last and it certainly does not make the fat murderers feel very good."[42]

I find this American Indian vision, this philosophy of life, utterly appealing — and convincing, because my Greek ancestors too, like the Indians, put man where he belongs: in the sacred land and among the creatures of creation. Both Greek and Indian had their feet firmly in the ground. They were peasants. They worshipped a variety of gods and ate a variety of nutritious foods. They lived in small communities. And they lived passionate political lives. They fought among themselves often enough that they failed to create one commonwealth. But with rare instances of savagery, they were tolerant of each other and other cultures. The Peloponnesian War between Athens and Sparta created such a wound in the world of those fiercely proud tiny Greek cities, that it was easy for the Romans to step in and bring that experiment in human freedom to an end.

But with the Indians of America, the nearly fatal confrontation came with wave upon wave of white immigrants from Europe. The Greeks were to some degree lucky that they faced enemies who

pillaged and conquered their land from a settled base — Rome, Northern Europe, Asia. The barbarian invasions of Greece were just that: nomadic and barbaric. The invaders killed, looted and burned on the run. The Romans governed Greece for a while and, centuries later, other Europeans and the Asiatic Ottoman Turks did the same thing. But in all that long winter of foreign political domination, the Greek people remained where they had always been — in their homes. They lost their beautiful gods, they lost their beautiful cities, schools, temples, museums and libraries. And within a few generations after the Roman conquest, the Greek people were humbled: from being the foremost military and cultural power in the Mediterranean and the world they were now uneasy peasant communities living in fear for their lives. That they made it to our day is proof of the power of their culture — an enormously rich peasant culture that carried the myths and languages and wisdom and love of the Greek people for their land and civilization.

The American Indians, on the other hand, were invaded by strangers from out of the big water who never wanted to go back home. Thus they killed as many Indians as they could, made the rest slaves or put them behind "reservations". And since the white invaders of America came with a ready-made, monotheistic culture, they treated the Indians they did not kill with the scorn and fanaticism of those who think they have *the only* god-given truth. That hubris rained spiritual fire on the Indians because, unless they were ready to kiss the icon and cross of the new religion, they were as good as dead. That the Indians made it through such a holocaust to our day is also proof of the strength of peasant culture and that culture's roots in the earth.

We know more about the Greeks than about the Indians because the Greeks are white and the Indians red. The Greeks created the science and philosophy that eventually led the Europeans out of superstition, which is why the white people of Europe and North America are still grateful to the Greeks and still write panegyrics about the "Greek miracle". What these panegyrics tend to overlook is the profound peasant simplicity of Greek culture —

the love for the beautiful in man, woman, the natural world; love for politics, attachment to an attractive polytheism, and veneration of the land, the seasons, the entire earth. Exactly like the Indians' mother earth. Demetra for the Greeks, Eloheh for the Indians. Eloheh — land, history, culture, religion — the council of all living things, the council of the universe. Perhaps the most revolutionary and original idea in the history of man.

We should love the American Indians, the peasants everywhere and those of our small farmers who raise food without toxins. They are all our brothers. They are the bridge to a new future. They are proof that the scientific culture of this industrial age is crude and poor and, because of that condition, it causes hunger throughout the world.

And while we learn to tune in to the rest of nature, we ought to take an interest in the political life of our community as if our very lives depended on that interest. Thucydides beautifully summarized the central idea of Athenian democracy when he said that "men are the city," the citizens of Athens make up Athens entirely. Neither the Athenians nor the other Greeks had much respect for the "state", *kpatos*, which meant brute force. It was the citizens of the *polis* (city) who debated, voted and made all the political decisions of the day. So much in fact that Thucydides would have found it impossible to understand those in our times who argue they are simply too busy to be involved in politics. "We don't say that a man who takes no interest in politics is a man who minds his own business," Thucydides said. "We say that he has no business here at all." This is because for the Greeks, politics was the same thing as the common good.

We should abandon our tradition of peddling favors and calling that "democracy". Neither should we stand for government by those who have money to buy themselves into the highest political office. Or let "special interests" dictate this country's domestic and foreign policy. Instead, we just have to get back to real democracy of working together as a community for the common good — give land to those who have none so that we increase the agrarian people from thousands to millions; learn

from the peasants and the Indians; bring our economy and culture in balance with the earth. If we do any of that, it will be easy to applaud small victories of the American Indian, the peasant, the ecological farmer against all kinds of tyrants, missionaries of aid, lenders, scientists, landlords.

Listen to the courageous words of Kipling Jiregari (a stone-age Indian peasant of the Binandere tribe of Papua-New Guinea) when sometime in 1980 he threatened a Japanese Company which was eating his only world: "Money has no future," he said. "Money disappears. Only man and the land remain when all else has disappeared. Therefore I have stopped the Company. No company shall destroy our land. If the Company's men come here again, we will kill them and eat them up. We received our land from God and one day He will ask to get it back. If anyone comes in here without permission, I will kill him. Our money has a hole in the middle. Tell the Company I said they should take their money and stick it on their prick and try to fuck with the money, instead of coming here and raping our land! Between Mambare River and Eia River, lies our land. If one of the Company's men comes here, I'll run him through with my spear. They shall never touch our forest where our food and our medicine is. The forest is our skin and without his skin man dies. This is my last warning...."[43]

It should become ours as well.

CHAPTER TWELVE

Democracy and Land Reform In America

With so few persons (from 50,000 to 100,000) in control of massive baronial possessions in the countryside, it is impossible to have a functioning republic. Eighty-five per cent of California's water, for instance, is used to irrigate desert farms in the Southern parts of the state. Grass and hay for cows and sheep use as much water as that consumed by all 27 million Californians. In fact agriculture in California is not merely a bitter social problem but a huge environmental and public health problem as well.[44]

Congressman James Weaver once spoke about the threat to democratic institutions from a handful of grain companies. He said: "These companies are giants. They control not only the buying and the selling of grain but the shipment of it, the storage of it and everything else. It's obscene. I have railed against them again and again. I think food is the most — hell, whoever controls the food supply has really got the people by the scrotum. And yet we allow six corporations to do this in secret. It's mind boggling!"[45]

No less mind boggling is the fact that entire regions like Appalachia have become the colonies of absentee land owners and corporations. The Appalachia Land Ownership Task Force surveyed eighty counties in Alabama, Kentucky, North Carolina,

Tennessee, Virginia and West Virginia. In February 1981 the Task Force reported to the US Appalachian Regional Commission: "Only one per cent of the local population, along with absentee holders, corporations, and government agencies, control at least 53 per cent of the total land surface in the eighty counties. Forty-one per cent of the 20 million acres of land and minerals owned by 30,000 owners in the survey are held by only fifty private owners and ten government agencies...With absentee ownership, the wealth derived from the land and mineral resources is drained from the region; with concentrated ownership, a few, primarily corporate owners, can dominate the course of a country's development." The Task Force also documented "a dramatic decline of farming in the region" with 17,000 farmers going out of business in the years 1969 to 1974 alone.[46]

One way to fight this colonial oppression and exploitation is through land reform in Appalachia, California and in the rest of the country. "It is trumpeted as a triumph of contemporary agriculture in the United States," said David Farrelly in his 1984 study, *The Book of Bamboo*, "that two per cent of the population produces the food for all the rest. Many hidden hours of hidden hands elude these statistics — deckhands and truckers coaxing oil from Arabia to Omaha tractors — but even if true, is it a desirable condition? If three per cent of the people raise all the food, 97 per cent are alienated from the soil and water and sun and subtle planet processes that hold us here. More and more people have been raised since childhood in a historically unprecedented dimension of exile from the earth itself, an exile celebrated as a blessed exodus from the bad land of toil. Contemporary with this exile, unprecedented destruction of forest, loss of topsoil, extinction of species, and elimination of native peoples have occurred. In the midst of this official mechanical madness — in which each bushel of corn is costing five bushels of eroded topsoil, each bushel of wheat, twenty — here and there is a quiet voice, a dirtied hand raised for an intimate agriculture, regional self-sufficiency, each of us more a skillful and intimate *amigo* of the way of plants and animals."

The paradigm of gentle agriculture — caring for people and the land and animals and wildlife and water — is the only path to our cultural survival. We either brush off our arrogance and look at the gentle peasant straight in the eye or we are headed for terribly serious, even catastrophic, ecological upheavals. At the same time, American scientists must work with farmers to transform industrial agriculture from an agrarian factory to a gentle way of living where several crops and animals are raised in balance with the delicate ecological demands of nature. Sustainable or gentle agriculture also means that rural America must be re-inhabited once again. Scientists must work hard to clean up the environmental mess of industrial farming, re-establishing the fertility of the land, and making it possible for beneficial insects, animals and other natural controls to emerge, displacing the toxins and the need for them.

CHAPTER THIRTEEN

Eros, Science, and Ecological Crime

Social policies of great vision will be necessary to support such a radical reversal in the work of science in the United States. This is because science in the United States is like an elixir capable of transmuting dust into gold, making mighty weapons, splicing the genetic stuff of life into new life, even destroying the earth.

Science is also a global religion, the only ideology that has a common language and politics transcending a multiplicity of languages, races, religions and frontiers. Finally, science is power, hidden and raw power, fueling the engines of war and industrial production, the single ingredient that made it possible for a relatively small number of white people to dominate the much larger black, red, yellow and mulatto populations of the world for the last 500 years.

Yet despite such an almighty reach throughout the globe, the children of technological culture are suffering the adverse effects of sterilizing their souls and of clearcutting diversity and dialectical opportunity and understanding from both nature and culture. Eros, the Hellenic passion for truth, the good and the beautiful, was violently uprooted from the Christian and scientific pedagogy of the white people for close to 2000 years to be replaced, first, by a superstitious punishment of the human body and mind for close to

1000 years and second, by a technical culture which is now close to 500 years old.

John Steinbeck said in 1953 that something was really wrong when people stooped so low for minute technical details but in the process missed the purposes of life. "Maybe the knowledge is too great," he said in *East of Eden*, "and maybe men are growing too small...Maybe, kneeling down to atoms, they're becoming atom-sized in their souls. Maybe a specialist is only a coward, afraid to look out of his little cage. And think what any specialist misses — the whole world over his fence."

I think Steinbeck is right: The specialist, the scientist, the expert of industrial societies, is forgetting the entire world while that world is falling apart. Men are, in fact, becoming atom-sized in their souls. Plato said in his *Symposium* that Eros gave birth to wisdom, poetry, music, medicine, archery, divination, metallurgy, weaving and beauty. About 2500 years later, it is quite problematic even to raise the question of Eros in relation to science — much less to argue that scientists are guided by the almighty Eros, once the greatest of all gods and passions in human culture.[47]

In fact, the flash of the Hiroshima atomic bomb changed the house of science forever. Never again would those gentlemen of physics and chemistry be able to say that their expert knowledge is neutral or above the lethal heat of battle. The ashes of Hiroshima contaminated all scientists. Children of the holocaust, the bomb, melting nuclear power plants, chemical and biological warfare, dioxins, toxic sprays, acid rain — these experts must look at these awesome consequences of their mental handiwork with considerable horror. Not that they always put to bad use what they know but they almost always fail to ask themselves why they do what they do. It is as if they are the latest incarnation of the eternal witch doctors, priests of a powerful world religion with heavy dogma and stupefying liturgies. They go through their schooling with their heads in the books and laboratories, ready to do the bidding of their pay masters. If the project is to come up with a nifty weapon to slaughter entire cities, fine, they design the super killing machine and turn the page to something else.

It is this evil ethic, this inability to say no to more Frankenstein's monsters, this intellectual blindness confusing right and wrong, that is threatening all life on earth. Many scientists believe that because they have a license for specialized knowledge they deserve the class privileges of their bosses. So they strive to bend some or all of the information at their disposal in the direction of power.[48] They forget that the price for manipulating the truth is the loss of their own soul.

For instance, they use "ecology" to describe not the beauty of the natural world but the incredible relationships binding man, grass, birds, trees, flowers and water together. They know we should be careful that our industrial activities don't damage this or that "ecosystem". After all, who wants to drink poisoned water or see birds gasping for life in the nearby corn field and lake? Scientists, however, are careful people. If they witness dying fish, they suspect something foul and human is doing the killing. But there is a chasm of cold and cruel indifference between the silent agonies of the dying water animals and the mechanical reaction of the observing scientist. The water animals are abandoning their world in bitter knowledge that their only nest has been made unfit for living by other animals claiming to run everything on earth. And the observing human looks at the poisoned creatures with the clinical detachment of a lab technician. No understanding here, no love.

The scientist thinks he is superior with his ability to cut up and memorize thick tomes of "scientific data". He spends the best years of his life not out in the open observing the natural world but in stuffy rooms mastering the sayings of other scholars like himself. And in those tedious studies he learns all about killing and violence. In fact his whole culture is red in blood. Just look at the torture, crushing, killing, maiming, blinding and hurting of animals by the millions in scientific laboratories, zoos, pet shops and slaughter houses throughout the world. Or look at those scientists working within the very industrial societies devouring the world's tropical rainforest. They know better than other human beings that skinning the earth alive, stripping the world of so much protective

cover, exterminating this planet's last paradise of plants and animals so that rich and powerful folk can have an abundance of luxurious furniture, toilet paper and tons of journals printing mostly tons of gossip and nonsense and advertisement, is the peak of folly.

Yet instead of attacking this massive ecological crime, the world's biologists play with computer models and trivial molecular pursuits. They investigate the most esoteric in animals and plants and, intentionally, fail to see that the universe of their plants and animals is shaken to its very foundations by the same greed and violence that supports them — the greed of the agrichemical manager who dreams of engineering corn seeds in an envelope of poisons; and the violence of those engineered technologies.

The world's biologists fail to see all that. They fail to see that the industrial systems of both Marxist East and Capitalist West are intellectually bankrupt. They use workers like metals. They put them through toxic fires in order to crush them. They pile people into cities so that they break their spirit of independence. And they train their scientists to think such an unnatural and bad association is natural and good.

That is why the scientific classes of the world are discarding so much of the earth's culture. It is no longer the love and care of the peasant for the land that count in farming, but the mining of the soil for more and more bushels of food. Scientists and engineers spend sleepless nights to make that agricultural miner efficient. And since their vision of farming is limited to immense flat lands filled with immense rows of one crop grown with the assistance of powerful machines and toxic sprays, their only ambition is how to get right to the core of that plant life and bend it to their dream. They see the complexities of ecology as so much vulgar detail they would rather forget. They parade their huge machines, vulnerable seeds and toxins like the miraculous capsules of all that is modern, scientific, progressive. And they spend enormous resources in the manipulation, programming and engineering of food crops to their taste. In fact they dismiss the ooze of life because they believe they can manufacture life.

The peasant, the primitive Indian, the wild seed and the exquisite flower look nice in a museum but not in the real world of toxic sprays and clearcutting of virgin forests. For this reason the best and the brightest of industrial societies don't get excited over the disappearance of so many species of plants and animals. And why should they? After all, in order to keep the peasant in the museum and the agribusinessman and state farm lording over huge empires of land, they supervise the inoculation of their very own food and nature with the same poisons they throw at cockroaches — poisons that never existed in the universe before, poisons that mutate both man and the environment into something else.

Of course such behavior exacts quite an ecological and social price: most of the earth is ruined from pollution and the spirit of man is wounded from the toxic effects of his giant technical and intellectual monoculture. His soul is no longer capable of seeking solace and love in the diversity and beauty and challenge of polytheism and gentle culture.

Yet that man, when he was a peasant, was in love with the earth. Octavio Paz says in *The Labyrinth of Solitude* that the "peasant — remote, conservative, somewhat archaic in his ways of dressing and speaking, fond of expressing himself in traditional modes and formulas — has always had a certain fascination for the urban man. In every country he represents the most ancient and secret elements of society. For everyone but himself he embodies the occult, the hidden, that which surrenders itself only with great difficulty: a buried treasure, a seed that sprouts in the bowels of the earth, an ancient wisdom hiding among the folds of the land."

But the living peasants of the Third World also cause fear and jealousy among the technicians of industrial societies who perhaps suspect that the peasants' ancient wisdom does have the seeds of Eros and science embedded in it. The peasants' science presents the only viable paradigm for the survival of the earth.

"You know as well as I do," one peasant is saying to another in *Things Fall Apart*, Chinua Achebe's powerful novel about Africa, "that our forefathers ordained that before we plant any crops in the

earth we should observe a week in which a man does not say a harsh word to his neighbor. We live in peace with our fellows to honor our great goddess of the earth without whose blessing our crops will not grow."

We still need to honor our great goddess of the earth because the mechanization of the world has sowed discord and anger in the human heart and mind.

CHAPTER FOURTEEN

Peasant Resistance: Defending the Sacred Land of Gasper Ilom

The United State is a standardized capitalist country run like a supermarket. It has few peasants, no gods, and practically no ethical standards in its domestic or international behavior.

The United States has science, however. And this science — violently divorced from Eros — is no longer a protest movement in defense of the truth but a massive business in support of the control of the earth by a handful of organizations.

Reuniting science and Eros through the ecological practices of farmers and peasants and through our personal commitment to the truth will not create any new science paradigm shift, but it is bound to revive man's eternal dialectical struggle for the improvement of the human condition, helping all of us re-establish our ties with our mother earth.

Of course this is not easy. Decolonization is revolution. And challenging authority and power is preparation for revolution. In fact, decolonizing the mind is a slow process with a thousand sources of inspiration and danger.

But for decolonization to be effective it has to be done in a way that does not insult or create even more fear. Taking away something from the mind — like "the bosses know better" or "it is normal that the landowners should have so much land" — is clearly not easy. It should be done smoothly and in such a way that

it is replaced by a thought of the person being decolonized. The teacher, in this case, ought to become a sensitive student and only suggest that which will guide the students themselves to figure out the truth.

A great work in this direction is *Hombres de Maiz* (*Men of Maize*) by Miguel Angel Asturias, one of Latin America's greatest writers. A son of Central America's most Indian country, Guatemala, Asturias was born in 1899 and died in 1974. His book was first published in 1949.

Men of Maize is a magical and compelling work. It explores the tragic consequences of the white invasion of the Indians' world — both on the social structure of the Indians themselves and on the ecology of the beautiful tropical forest. Asturias' novel is a cosmic cry against that barbarous invasion. The Indians and the earth revolt to prevent the white invaders from burning the forest for plantation-style crops and cattle ranching. The Indians' culture disintegrates with the disintegration of their green world.

Men of Maize is the green *Iliad* of American literature, particularly of the Indian people. The protagonist, Gasper Ilom, will resurrect and free the Indians from their slavery to the white invaders. In fact, the Indian guerrillas fighting in Guatemala honor Gasper Ilom (and Asturias). Maize, the sacred food of the Indians, is also the stuff that makes human flesh. Thus sowing maize is no different than making children. And one would not sell children. Maize sustains life so you don't grow maize for any purpose other than that of sustenance.

Men of Maize sees the invading maize growers as the enemy of the Indians and Indian culture because they deforest the Indians' world to cultivate maize for riches, not sustenance. "Just as though men made their women pregnant to sell the flesh of their children to trade the life of their flesh, with the blood of their blood, that's what the maize growers are like who sow, not to sustain themselves and support their families, but covetously, to make rich men of themselves."

The other important idea of Asturias is that of Indian revenge. The Indians know the value of gold but they scorn it — inten-

tionally. "The naked Indians," Asturias says, "standing in rivulets which formed webs of water, capillary manes of liquid systems, were blind forces hurling onto the bonfire of worldly interests hundreds of glowing embers, whose true value was the total ruination of man. The Indians avenged themselves on their oppressors by putting means of perdition in their hand. Gold and more gold to create useless things, factories full of stinking slaves in the cities, torments, anxieties, violence, without ever remembering to live."

Without ever remembering to live! What a profound truth about the world's industrial people! Lethargy for the vast majority, comfort for a few, and beastliness for all. Not a single thought about the purposes of life — despite the hundreds of thousands employed and trained in so-called philosophy and the sciences. White industrial culture is so ethnocentric, anthropomorphic, individualistic, plutocratic and plutolatric, mechanomanic, monotheistic and Orwellian that nothing — save a cultural revolution — can remind the men of machines how to live and to leave a living green world for their children. In such a culture of temporary pleasure and mechanized death, children themselves, in a spiritual sense, are sold and eaten alive for profit. No one of these mechanical men ever thinks that gold is a means of perdition, the currency of perpetual exploitation and clearcutting of culture and nature.

Asturias' ideas are woven, like the threads of an intricate Indian fabric, in the history and mythological culture of the Indians. And like the *Iliad* of Homer, Asturias' *Men of Maize* unites the gods and people and nature into one universe and ecosystem. Men become animals, they are their animal image, and speak and understand a magic language rich of metaphor and meaning. The firefly wizards fail to protect Gasper Ilom, but they curse Ilom's executioners with death and sterility. These firefly wizards — the "descendants of the great clashers of flint stones, who dwell in tents of virgin doeskin, who sow seeds of light in the black air of the night" — are like Homer's gods and goddesses, the living spiritual world of the earth, "the most Indian of Indian women." They are also the embodiment, the dreams of the Platonic ideas, the guard-

ians of the enchanted underground world of light and pure beauty, the paradise for the purification of the soul, the protectors of the forests, animals, the earth.

Men of Maize is both decolonizing and liberating to the mind. It depicts an exceedingly complex, mysterious, mythical culture, nearly dying, at war against powerful enemies. Yet the wisdom of that Mayan civilization is so profound, so intimately part of the wisdom of the green earth, that it is certain to survive the lengthy oppression of the white colonizers. Between the soldiers, the priests, and the exploiters of the land, the maize growers, the Indians have no choice but to keep fighting. Their struggle is the struggle of prisoners of war, resisting silently with contempt, fear, hatred, the machete, the gun. But that perpetual struggle has given the Indians the courage to absorb almost the truth of their being, the fact that they are right about the purposes of life.

Men of Maize is also a revolutionary document. It blazes a path of originality for Third World literature, and like great works of wisdom — the *Republic of Plato*, Leo Tolstoy's *Resurrection*, Fyodor Dostoyevsky's *The Brothers Karamazov* or John Steinbeck's *The Grapes of Wrath* — it asks those few fundamental questions that explain life for what it is. Dostoyevsky said that the earth is saturated with tears. Is it important if those tears are the tears of the Russian peasant or the American Indian? And why did the Russian men of wealth and power bring so huge a suffering to their own people for so long? Perhaps men who tyrannize other men lose all their humanity.

The Russian peasant and the Indian have this in common. They are close to the earth. And their tyrants always appear to be moving away from the earth. The maize growers have been trading in wheat and maize for a very long time. The peasant is careful with his sowing and harvesting. He does recognize the sacred in the land. But the merchants of grain and the maize growers — reflecting the entire economic system of capitalism and state socialism — use the peasant and the Indian like they use the soil to enrich themselves. It is this failure to understand the sacredness of the earth that robs the maize growers of the very memory of life

and, therefore, makes their cruel behavior appear as part of a rational, nay, scientific, enterprise.

Yet adding more tears to the bleeding earth is neither rational, scientific nor human. Exhausted and greedy arguments about economic efficiency and growth should no longer be used to cover up the ecological and social atrocities of the maize growers, particularly now that these gentlemen farmers carry doctorates from the culture that made the genocide of the Indians and peasants nearly a science.

If the people of machines want to remember to live, they just have to come to grips with their bloody past. History is not a convenient tapestry of stories written by those with the power of the gun. History is the beautiful and the ugly that took place yesterday. Reflect on that, grasp its significance, and you are the better for it. Catharsis, the spiritual cleansing of our soul, the decolonization of our mind, comes with responsible and intelligent understanding of who we are in our world.

This means a lengthy dialectical and social struggle — a struggle with knowledge, a struggle against the comfort of routine but sterile work. Bertolt Brecht said in one of his poems that such a struggle could be turned "into common experience and justice into a passion.

"Your science," he said, "will be valueless...And learning will be sterile...unless you pledge your intellect to fighting against all enemies of all mankind."

This also means we should put an end to the maize growers' relentless attack against the earth. We must continue Gasper Ilom's struggle.

"Gasper," said Asturias in his *Men of Maize*, "grew older as he talked. His head had fallen to the ground like a flowerpot with the buds of tiny thoughts. What Gaspar was saying, now that he was old, was forest. What he was thinking was forest remembered, not new hair...We've got to clear the land of Ilom of them who knock the trees down with axes, them who scorch the forest with their fires, them who dam the waters of the river that sleeps as it

flows and opens its eyes in the pools and rots for wanting to sleep...for either the earth that falls from the stars is going to find some place to carry on dreaming its dream in the soil of Ilom, or they can put me off to sleep forever. Get some old rags together to tie up my things, and don't forget the cold tortillas, and some salt beef, and some chili, all a man needs to go to war."

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Carolyn Merchant's *The Death of Nature* (New York: Harper and Row, 1980) is an excellent study of the relationship between feminist and ecological consciousness in the last 1000 years, side by side with the rise of man's domination of nature. *American Environmental History* (San Francisco, CA: Boyd and Fraser, 1977), *American Environmentalism* (College Station, Texas: Texas A & M University Press, 1980) and *Environmental Protection in the United States* (San Francisco Study Center, 1987) by Joseph M. Petulla bring the discussion on ecology and the environment to North America and the 20th century. Petulla's books give the history, economic background and politics on the evolution of environmental policy in the United States. They are indispensable reading.

The United States, however, is going through a severe environmental crisis. Daniel Faber and James O'Connor explain the origins of that social problem in "The Struggle for Nature: Environmental Crises and the Crises of Environmentalism in the United States," *Capitalism, Nature, Socialism*, Summer 1989, p.12-39. See also Brian Tokar's article. "Ecological Radicalism," *Zeta Magazine* December. 1988, p.84-91. But the most interesting analysis of the role of U.S.

environmentalists in the 1990s is an article by Mark Dowie, "American Environmentalism: A Movement Courting Irrelevance," *World Policy Journal*, Winter 1991-92, p.67-92. Aldo Leopold in his classic, *Sand County Almanac* (New York: Oxford University Press, (1949), and Rachel Carson in another classic, *Silent Spring* (Boston: Houghton Mifflin, 1962), brought the ideas and importance of a balanced ecosystem down to the level of public debate.

Unfortunately, agriculture is still a neglected field of knowledge. By its very nature, agriculture is interdisciplinary yet agricultural scientists and economists are doing their best to make agriculture another science like biology.

Thus their writings are biased towards tiny pieces of research and specialization. Also, agricultural scientists have kept the curious notion that what they do is value-free so they have stayed away from the social implications of farming.

The following works document the effects of factory farming and agricultural research on the science, universities and people of the USA:

Walter Goldschmidt, *As you Sow* (Montclair, N.J.: Allanheld, Osmun, 1978, originally published in 1947);

Jim Hightower, *Hard Tomatoes, Hard Times* (Cambridge, Mass.: Schenkman, 1973);

Wendell Berry, *The Unsettling of America* (San Francisco, CA: Sierra Club, 1977);

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Cary Fowler and Pat Mooney, *Shattering: Food, Politics, and the loss of Genetic Diversity* (Tucson, AR: The University of Arizona Press, 1990);

Charles Piller, "Ultimate Vaccines: DNA - Key to Biological Warfare?" *The Nation*, December 19, 1983, Front Cover, p.597-601;

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Even the US Department of Agriculture admitted in *Structure Issues of American Agriculture*, a report prepared by its Economics, Statistics and Cooperative Service and published in November 1979, that American agriculture was, in all likelihood, fostering economic cannibalism among farmers with the result that only 200,000 of those farmers were producing nearly two-thirds of the country's food and fiber.

The following books document some of the social and ecological consequences of factory farming and development in the United States. They will remain classics for a long time to come for they recreate man-made disasters with all of their tragic effects:

John Steinbeck, The *Grapes of Wrath* (New York: Viking, 1939);

James Agee and Walker Evans, *Three Tenant Families: Let Us Now Praise Famous Men* (New York: Ballantine, 1976, first published in 1939);

Donald Worster, *The Dust Bowl* (New York: Oxford University Press, 1979) and *Rivers of Empire* (New York: Oxford University Press, 1985);

Marc Reisner, *Cadillac Desert: The American West and its Disappearing Water* (New York: Penguin Books, 1987);

David Sheridan, *Desertification of the United States* (Washington, D.C.: US Government Printing Office, 1981).

Yet few if any people seem to have learned anything from the dust storms of the 1930s. Under the guise of "development", much of the rest of the entire world is rushing to machines and chemicals and monoculture in order to make food and money out of the land by farming fast, with few people. A near classic paradigm of this violent process is still going on in California, America's most recent frontier.

Donald Worster in his *Rivers of Empire*, a great and pathbreaking study of the ecological and social crises of the arid region of the United States, argues convincingly that federal reclamation of the arid West was compelled by an unrelenting American cultural

imperative to possess the whole earth or, at least, that earth within the borders of America. Such aggressive development policies are by now the norm - moving fast throughout the world. The movement of technologies and experts is usually from the societies of Europe and North America to the Third World.

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The dependence of the Third World on white technicians for food, in fact, has created enormous problems for the rural people of those largely non-white societies. Here, my book, *Fear in the Countryside* (Cambridge, Mass.: Ballinger, 1976), and the study of Pat Roy Mooney, *Seeds of the Earth* (Uppsala, Sweden: Development Dialogue, 1979) explain why the transformation of peasant farming into plantation agriculture brings about unexpected consequences like hunger, agrarian poverty and unrest, ecological upheavals and, potentially, widespread crop wipe-outs.

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Donald Worster, *Nature's Economy: A History of Ecological Ideas* (New York: Cambridge University Press, 1985);

Boyd Gibbons, "Aldo Leopold: A Durable Scale of Values," *National Geographic*, November 1981, p.683-708;

William Cronon, *Changes in the Land* (New York: Cambridge University Press, 1983);

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Peasants know what they are doing in farming and pest control. During the war of independence in Mozambique, for instance, Samora Machel told his cadres: "Our people have a great deal of knowledge about the resources of nature, even though this knowledge is empirical and often distorted by superstition. In our

education we should encourage teachers and pupils to compile the empirical knowledge of the masses and analyze it critically...We do not want science to be used to enrich a minority, oppress people, stifle the creative initiatives of the masses, the inexhaustible source of collective progress." (Cited in *Monthly Review*, July-August 1986, p.98-99).

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Harvest of Devastation is an eloquent denunciation of the destruction of small farmers and ecological agriculture in America. It documents the takeover of the land by mammoth agribusiness corporations that have little or no links with the earth. It also describes the mindless replication of this process in other countries as well, from France to Africa and Latin America, through collaborating elites and shows how hunger across the planet increases as the small farm is de-stabilized. The book is a poignant introduction to the invention of a Third World within the United States of America.

About The Author

E.G. Vallianatos, Hellenic-American writer, is the author of *Fear in the Countryside* and *From Graikos to Hellene*. He has been a Visiting Professor of international environmental studies and Third World Development at Humboldt State University, the University of New Orleans, and Bard College. He teaches at the American University, Washington D.C. USA.

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